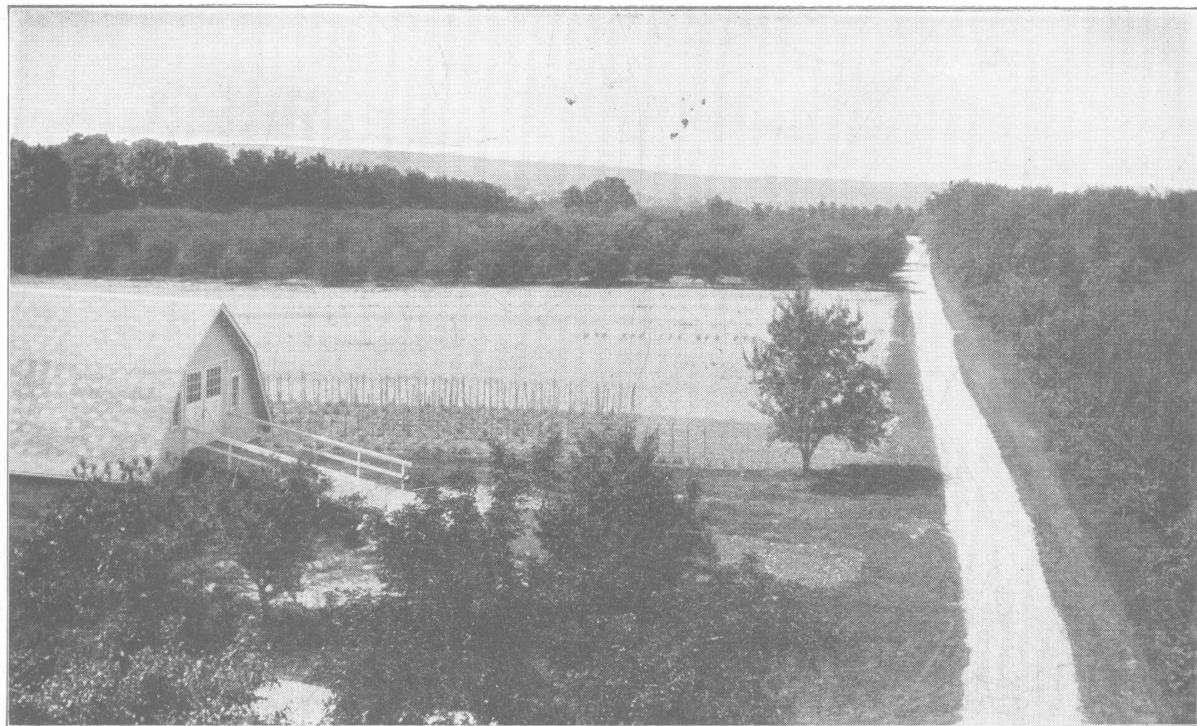


# Varieties Of Apples In Ohio, II

C. W. Ellenwood



OHIO  
AGRICULTURAL EXPERIMENT STATION  
Wooster, Ohio



**Looking north from the "Hort" barn**

Fruit storage building, left; garden and variety cherry orchard, center; variety apple orchards, right

# Varieties Of Apples In Ohio, II

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This bulletin is supplementary to Bulletin 290, published in 1915. It is the purpose of this series to set forth the behavior of the several varieties under trial in the Experiment Station orchards at Wooster. The earlier plantings in these orchards, beginning in 1893, were largely for variety trials. Thus far approximately 500 named varieties of apples have been planted.

Those included in this bulletin have not been previously described by this Station. The descriptions in every case have been made from specimens grown at Wooster. Many of these varieties have little or no value in Ohio. None of them is a leading commercial sort. Some are rarely cataloged, others are not cataloged at all. Many of the varieties have already been removed and others are being eliminated each year.

This report is intended to serve as a permanent record of the behavior of these varieties at Wooster. It is also hoped that the data may contribute to the knowledge of these varieties and be of some value to growers in the selection and elimination of varieties.

Records are kept of the dates of the first and full bloom of each tree, the date of ripening, and the quantity of fruit produced annually. A detailed description of tree and fruit and ink drawing of every variety fruited are kept in the files of the Horticultural Department.

A total of 116 varieties are described in Bulletin 290, 155 in this bulletin, and 1, Gallia Beauty, in Bulletin 391. Thus a report on the behavior of 272 varieties has now been published.

Nurserymen are offering fewer varieties now than 10 or 20 years ago but the list is still large. In 1926, 75 nurseries cataloged a total of 302 varieties.

Some of the varieties described in this bulletin—Benoni, Butter, English Rambo, Esopus, Opalescent, Ortley, Red Astrachan, Richard Graft, Smokehouse, Summer Pearmain, Virginia Beauty, White Pearmain, Wismer, and Worcester Pearmain—have at least some value in Ohio because of high dessert quality or other meritorious characteristics.

It is the purpose of the Station to maintain such of these better varieties as are not generally cataloged by nurserymen as a source

of grafting wood. Cions or buds of these varieties will be supplied as far as possible upon application; the only charge being for postage and the actual cost of labor in cutting and packing the wood.

The form of description used in this bulletin follows closely that of Bulletin 290. The following comments on the form of description and the accompanying plate are copied from Bulletin 290.

Descriptions of the Fruit: The accompanying plate showing cross sections of apples illustrates a number of characteristics commonly considered when describing apples.

*a. Christmas Banana.* a local seedling sent to the Department during the past season. The following characters may be emphasized: Size large; form globular, symmetrical; stem medium to long, rather stout; cavity wide, deep, russeted; calyx and basin very small; core rather large, open.

*b. Chenango.* Size large; form oblong, inclined to ovate or "egg-shaped"; stem rather short; cavity large, smooth; calyx large; basin shallow; core large, partly open.

*c. Lawver.* Size medium; form roundish-oblate; stem long, rather slender; cavity large, furrowed, russeted; basin and calyx of medium size; core large, open.

*d. Buckingham.* Size large; form roundish-conical, with broad base (base the "stem end", apex the "blossom end"); stem of medium length, slender; cavity wide, deep, slightly russeted; basin wide, deep, furrowed; calyx rather large, open; core small, closed.

*e. Sierra.* Size large; form roundish-oblate, inclined to conic, with a very broad base; stem very short, stout; cavity very wide, deep, smooth or slightly russeted; calyx large, wide open; basin very wide, rather shallow, furrowed; core small, closed.

*f. Golden Sweet.* Size medium to rather small; form oblate to roundish oblate; stem very long, slender; cavity and basin medium size; calyx small, closed; core of medium size, nearly closed.

In many cases size in any part of the fruit is a relative term, and must be considered as related to the average size of the apple as a whole for example: the core of "*f*" is described as of medium size, but the same size of core in a large apple, such as "*e*", would be considered small. To be a little more definite with regard to size of the apple as a whole, the following approximate dimensions are given:

Size small—diameter below  $2\frac{1}{2}$  inches; medium— $2\frac{1}{2}$  to 3 inches; large—3 to  $3\frac{1}{2}$  inches; very large— $3\frac{1}{2}$  to 4 inches or larger.

Some of the terms used in describing the texture, surface, and color of the skin are easily understood, while some of the characters are difficult to describe with any terms commonly used. A few of the terms which may not be readily understood are as follows:

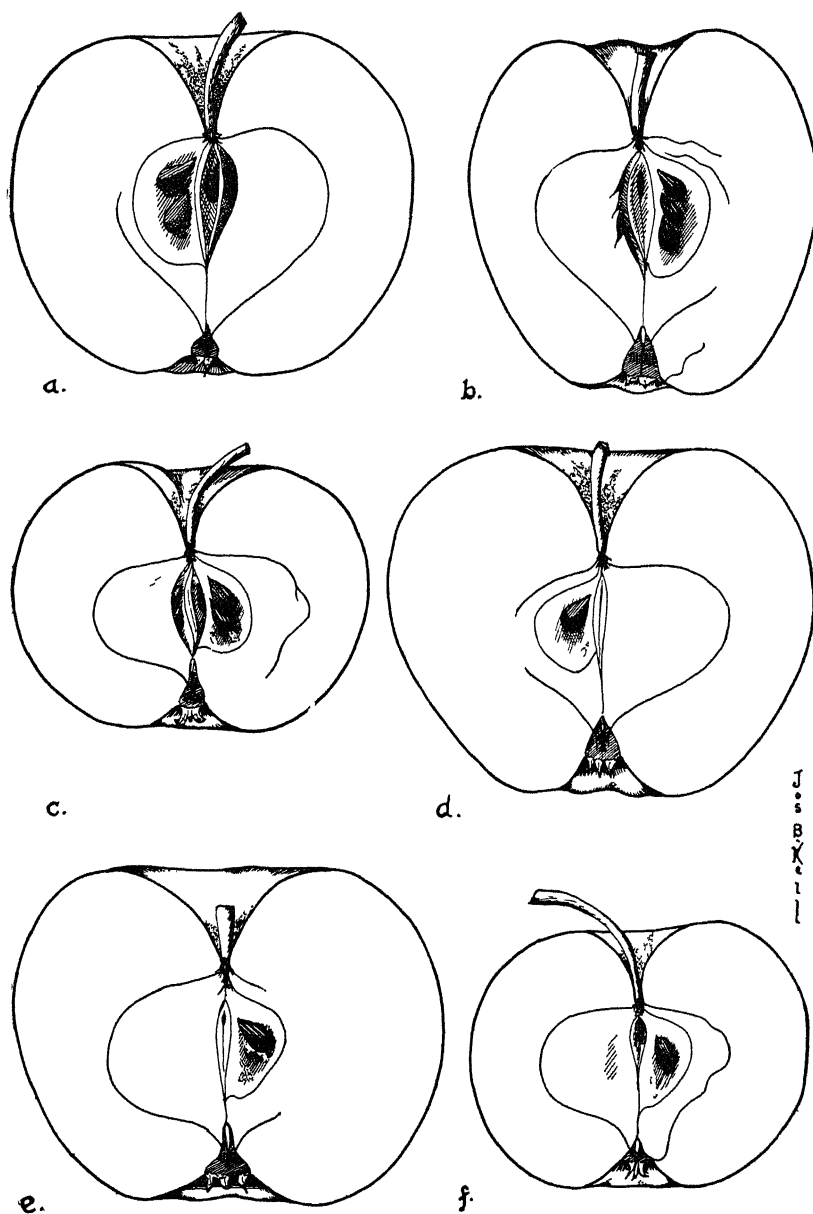


Fig. 1.—Some typical forms of apples

*Scarfskin.*—A superficial layer of cells usually grayish in color which greatly modifies the coloring of some apples, appearing in streaks, usually on the base of the apple. Pumpkin Sweet is a good example of this. Sometimes the surface is marked with a network of minute cracks, which give the apple a dull appearance, as the Wine-sap, for example.

*Bloom.*—A very thin, whitish, waxy coating, covering the entire apple in some varieties, of the same character as the coating of "bloom" on plums and nectarines, as, for example, McIntosh.

*Coloring.*—The many shades of red, yellow, and green found in apples would be difficult to describe if the names of the exact shades of color were to be used. As much as possible, names of shades which are used in common speech, were used in the descriptions.

The term "red" is not often used because red is a primary color and not a shade. Light to deep pink, shading into light to deep crimson, thence thru the shades of carmine or purplish red to the deep-wine color and almost black of some varieties is the range of the red coloring of apples. The shades of green in immature apples are modified in nearly all varieties to shades of yellow when maturity is reached, and are often described as "undercolors" when shadings of red are also present.

A "blush" is a continuous shading without any suggestion of stripes. "Mottled" is an uneven distribution of coloring.

A "stripe" is a narrow band of coloring extending over the surface for a large part of the distance from the base to the apex. A "streak" is a short, broken form of stripe. A bronze or brownish coloring appears on some varieties as a shading or bluish.

The following publications have been used in the preparation of the descriptions contained in this bulletin:

*Apples of New York* Vols. I and II, S. A. Beach; *American Horticultural Manual*, Part 2, Budd and Hansen; *American Pomology*, John A. Warder; *The American Fruit Culturist*, John J. Thomas; *Fruits of Ontario*, the Ontario Department of Agriculture; *Fruits and Fruit Trees of America*, Downing; *Elliott's Fruit Book*, Elliott; *Fruit Garden*, Barry; *Cyclopedia of Hardy Fruits*, by Hedrick; Bulletins and Year Books of the U. S. Dept. of Agriculture; and bulletins from a number of state experiment stations.

Inasmuch as the specimens used in making the descriptions in this bulletin were grown at Wooster, due allowance should be made in the interpretation of the descriptions in other sections.

#### GROUP CLASSIFICATION OF APPLES

J. B. Keil, formerly of the Department of Horticulture, made the original notes on many of the varieties described here, and also arranged the group classification which follows:

Any extended work with the numerous varieties of apples now in cultivation, such as that connected with variety tests in the Experiment Station orchards, soon brings to the attention of a careful observer the similarities of many varieties, which make possible a classification into more or less distinct groups.

A number of noted pomologists have approached this subject from several viewpoints, and have attempted to arrange varieties into groups according to various common characteristics.

In the course of a year, a large number of apples are sent to the Department of Horticulture of the Ohio Experiment Station for identification, and the reference books at hand are used when necessary to establish the identity, if possible, of such varieties as may be unknown to the members of the department.

Some varieties are easily recognized by a peculiarity of form or coloring, and may be identified with little chance of a mistake. On the other hand, such variations occur in some varieties, even within the crop from a single tree, as to confuse the most expert and make an identification difficult. In such cases a wider acquaintance with varieties under their group characteristics will be needed to properly identify some varieties.

Bulletin 275\* of the New York Agricultural Experiment Station has been found of great value in the classification of varieties of apples. In this publication the authors make use of previous work along this line, and present a list of 308 varieties placed in 36 groups. This, however, is only a part of the number of apple varieties listed in the catalog given in the same Bulletin, in which over 600 varieties are named, and but a small part of the total number of varieties in cultivation.

These groups were arranged primarily from the standpoint of adaptation to various sections of New York State, and not especially to aid in identification of varieties. However, the writer has found the classification so useful in his line of work that an adaptation of it was arranged to include also varieties more common in Ohio than in New York. This resulted, as might be expected, in an extension of the groups adapted to more southern sections than those of New York, which is manifested by the additions made to the Romanite, Rome, and Winesap groups.

Additions were also made of new varieties tested in the Station orchards, as they became known sufficiently to place them in a group with some degree of certainty.

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\*"Varieties of Apples for New York," U. P. Hedrick, N. O. Booth, and O. M. Taylor, New York (Geneva) Experiment Station, Bul. 275.

To avoid misunderstanding as to the importance and reliability of the classification here offered, it is perhaps sufficient to quote from the bulletin mentioned above:

"It cannot be hoped that the groups given are all perfect. Without question some varieties have been misplaced, some have been omitted, and we have not even attempted to classify the great majority of the sorts listed in the catalogue, having no fruit at hand nor definite data from which to work. Besides it is scarcely possible that a wholly satisfactory classification may ever be made because of the infinite variation in the varieties themselves. The groups must be taken, then, as tentative, subject to modification upon further study, and presented here only as a means of showing the adaptations of varieties rather than as a part of a system of classification."

To this the writer subscribes, with the exception of the concluding clause, since he has found this arrangement of groups a valuable aid in the identification of varieties, and the material in the following pages is offered with emphasis largely upon this phase of the subject.

The members of a group are selected largely on the basis of what may be termed "family resemblance" and any apple grower whose acquaintance with varieties includes several of any of these groups will understand at once what is meant. For example, the Rambo group contains several varieties of a distinct flavor easily recognized as "Rambo". The Romanite group is characterized by coloring, texture of flesh, and season of maturity, as well as a flavor which a person of keen perceptions will soon recognize as peculiar to the group. The Winesap group has peculiarities of form and coloring which are quite reliable in placing members of this group.

This classification includes and supplements the work as published in the New York bulletin, and changes and additions are to be considered subject to revision at any time, as further study of the varieties may indicate.

Varieties and groups added by the writer are indicated by an asterisk (\*).

#### THE APORT GROUP

Large, handsome, coarse-textured apples, in season late summer or fall, quality medium to poor. Adaptation general, but of questionable value for Ohio as compared with varieties of higher quality.



Alexander  
Aport  
Aport Orient  
Arabskoe  
Bietigheimer

Bismark  
Constantine  
Great Mogul  
Howard Best

Judson  
McMahon  
Thompson  
Wolf River

#### THE BALDWIN GROUP

Highly-colored winter apples, of good size and good to excellent flavor, with marked similarities in texture, flavor, form, and coloring. Their behavior indicates a general adaptation to northern Ohio and especially the counties bordering on Lake Erie.

Babbitt  
Baldwin

Olympia  
Red Russet

Sutton  
Tufts

#### THE BEN DAVIS GROUP

Rather large, brightly-colored, with thick skin and firm, coarse flesh of poor quality. Endure rough handling, and keep well in storage. Adapted to the southern half of Ohio.

Arkansas Beauty  
Arkansas Belle  
Ben Davis  
Black Ben Davis  
\*Calumet  
Coffelt  
\*Collins

Dickinson  
Eicke  
Etris  
Florence  
Gano  
\*Missouri Pippin

\*Moneymaker  
\*Highfill  
\*Red Ben Davis  
\*Shockley  
Shirley  
Wallace Howard

#### THE BLACK GILLIFLOWER GROUP

Medium size, dark red coloring, oblong or ovate form, good quality, but rather dry and coarse in texture. Less hardy than the Baldwin Group, and more particular as to soils.

Black Gilliflower  
Lady Finger

Skelton  
Scallop Gilliflower

Striped Gilliflower

#### THE BLUE PEARMAIN GROUP

Somewhat large, dull red with pronounced bluish bloom, mild flavor, fair quality, dense texture and thick skins. Adapted to northern conditions, and largely displaced by varieties of better quality in Ohio.

\*Baltimore  
Baxter  
Bethel  
Blue Pearmain  
\*Bonum  
\*Crop Choice  
DuBois  
Gideon Sweet

\*Isham Sweet  
Jewett Red  
Mabie (Sweet)  
Monroe (Sweet)  
\*Moore's Sweet  
\*Nickajack  
Oel Austin

Perry  
\*Ramsdell Sweet  
Rutledge  
Scarlet Beauty  
Stone  
Victoria  
Windsor

## THE CHENANGO GROUP

Medium size, striped bright red, oblong conic, of good quality, with delicate texture and peculiar aroma. Adaptation similar to that of Baldwin.

Chenango

Stump

\*Williams

## THE EARLY HARVEST GROUP

Summer apples of medium size, pale yellow or nearly white in color, of good but not superior quality. Of general adaptation to Ohio conditons.

Cooper Early White  
\*Doyle

Early Harvest  
\*Early Ripe

Parry White  
\*Warfield

## THE FAMEUSE GROUP

Medium size, handsomely-colored, roundish-oblate or conical, thin skin, good to excellent quality, with clear white, tender flesh. The tendency to reproduce the type from seed is a striking peculiarity. A susceptibility to attacks of apple scab is also prominent. McIntosh is best adapted to Ohio conditions. As a group these varieties are much better in more northern latitudes.

Boy's Delight  
\*Butter  
Canadian Baldwin  
\*Cortland  
\*Duling  
Fameuse  
Fameuse No. 1

LaVictoire  
Fameuse Sucre  
Hiliare  
\*Joyce  
Louise  
\*McIntosh

St. Lawrence  
Scarlet Pippin  
Shiawassee  
Striped Fameuse  
\*Sharon  
Switzer

## THE HIBERNAL GROUP

Probably the hardiest varieties of Russian origin, adapted to a cold climate and maturing in a short season.

Bogdanoff Glass  
Hibernal

Ostrakoff

Romna

## THE KESWICK GROUP

Early apples of English origin, pale green or yellowish in color, with an extreme susceptibility to blight. Indifferent quality.

Colton

Keswick

Lord Suffield

## THE LADY GROUP

Very small, roundish-oblate, brilliantly-colored, sprightly flavor, and excellent dessert quality. Adaptation to Ohio conditions unknown.

Black Lady	Lady	Sleight
Helen	Large Lady	Star Lady
Highland Beauty	Rose Colored Lady	

## THE LAWVER GROUP

Highly-colored; rather coarse, firm, dense texture, and inferior quality. Long keepers, adapted to southern Ohio.

Atkin	Lawver	McAfee
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## THE LIMBERTWIG GROUP

Adapted to southern conditions. Poor quality and rather small size. (Could be added as a section to the Romanite Group.)

Green Limbertwig	Red Limbertwig	*Willow Twig
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## THE LONGFIELD GROUP

Of Russian origin. Indifferent quality.

Longfield	English Pippin
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## THE LIVELAND GROUP

Of Russian origin. Adapted as early summer apples to most parts of Ohio.

*Anisim	Liveland	Red Wine
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## THE NEWTOWN SPITZENBURG GROUP

Varieties little known in Ohio. Medium size, roundish-oblato, red-striped, high quality.

Bethlehemite	Duncan	Newtown Spitzenburg
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## THE NORTHERN SPY GROUP

Large, red striped, roundish-oblato, ribbed, with delicate to heavy bloom, juicy, crisp, fine-grained, and good to excellent in quality. Fastidious as to soils, but generally adapted to northern Ohio, where their season is early fall to midwinter.

Arnold	Hagloe	Ontario
Doctor	Melon	Standard
*Family	*Niobe	Wagener
*Fanny	Northern Spy	Wagener Improved

## THE OLDENBURG GROUP

Medium to large in size, usually red-striped, acid or subacid, valuable mostly for culinary uses. In season summer and fall. Of Russian origin with a few exceptions. The group includes several of our best summer culinary varieties.

Anarnoe	Glass Green	Patten Greening
Autumn Streaked	Golden White	Pewaukee
Berkoff	*Henry Clay	*Rolfe
Borovinka	Hoadley	Striped Winter
Champagne	*July	Tetofsky
Charlamoff	Lead	*Titus
Crimean	Lou	*University
Dudley	*Maxon	*Wm. Prince
Felix	Milwaukee	Yahnke
Gladstone	Oldenburg	Zettle

## GRAVENSTEIN SECTION

Banks (Red Gravenstein)	Gravenstein	*Winterstein
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## WEALTHY SECTION

*Okabena	Peter	Wealthy
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## THE RALLS GROUP

Medium to small, somewhat dull in color, juicy, good quality, late keepers. Adapted to southern conditions, and not of great value in Ohio.

Doctor Walker	Ingram	Salome
Father Abram	Milam	*Smith Cider
*Giant Jeniton	Ralls	*Walbridge

## THE RAMBO GROUP

Mostly medium to small, roundish-oblate, dull in color, good to excellent in quality. Generally adapted to Ohio conditions.

Domine	Milden	*Summer Rambo
*English Rambo	Pennsylvania Redstreak	Wells
*Grosh	Rambo	*Vandevere
Lacker	*Smokehouse	*Van Eaton

## THE RED ASTRACHAN GROUP

Summer apples, medium to large in size, crisp, subacid, fair to good quality, of general adaptation to Ohio conditions.

Anis	Red Astrachan	White Astrachan
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## THE RED JUNE GROUP

Medium to small summer apples, brilliantly-colored, of tender flesh and mild flavor. Fine for dessert. Adapted as early varieties to the entire State.

\*Coffman  
\*Red June

\*San Jacinto

\*Wilson Red June

### THE REINETTE GROUP

With few exceptions rather large in size, of green or yellow ground color, with or without blush, and generally of good quality. A large, poorly-defined group, here divided into four sections. Of general adaptation to Ohio conditions, with a few climatic limitations such as with Green and Yellow Newtown, which mature to a normal condition for the variety only in the southern counties.

#### FALL PIPPIN SECTION

Albion	Golden Pippin	Magenta
Banana	Greenville	Maiden Blush
Boiken	Hawley	Newark Pippin
Crowns	Holland Pippin	Ohio Pippin
Elgin Pippin	*Hyde King	Reinette Pippin
Ewalt	*Iowa Blush	Sharp
Fall Harvey	Jack	*Stuart Golden
Fall Pippin	Landsberg	Walker Beauty
French Pippin	Lehigh Greening	White Spanish Reinette
Geneva Pippin	Lowell	York Pippin
*Gideon		

#### RHODE ISLAND SECTION

Autumn Swaar	*Fall Orange	Sheddan
Bottle Greening	Holland Winter	Starr
Canada Reinette	Monmouth	Sweet Greening
*Carolina Greening	Northwestern	Tobias Pippin
*Dona Maria	Rhode Island	

#### NEWTOWN SECTION

Admirable	Middle	Shannon
Belmont	Peck	Slingerland
*Golden Newtown	Perry Russet	*White Pippin
Grimes	Pickard Reserve	Yellow Newtown
Huntsman		

#### SWAAR SECTION

Mann	Seneca Favorite	Swaar
*Nixonite	*Sequoia	*Tolman

### THE ROMANITE GROUP

Variable in size, inclined to be somewhat dull in color in northern Ohio, good to poor in quality, nearly all late keepers, and adapted to the southern half of the State. Seedlings from varieties of this group may be expected to retain group characteristics.

*Bayard	*Linville	Pennock
*Bentley (Sweet)	*Loy	Romanite
Buckingham	*McCuller	*Sierra
*Edwards	Minkler	*Sheriff
Fink	Missing Link	*Springdale
Gilpin	*Monocacy	Stark
Glenlock	Nero	Virginia Beauty
*Hughes Late	*Nottingham	*Whinery
Lansingberg	*Oliver Red	York Imperial

#### THE ROME BEAUTY GROUP

Highly-colored, firm flesh, medium in quality unless grown under the most favorable conditions. Adapted to southern Ohio.

*Ben Hur	*Giffin	*Red Rome
*Ensee	Lankford	Rome Beauty
*Gallia Beauty	*Paducah	

#### THE RUSSET GROUP

Small to above medium in size, russet skins, dense but fine-grained texture, good to excellent quality, some good keepers. Adapted to Ohio conditions, but not so well esteemed in the markets as formerly.

Brownlees	Golden Russet	Roxbury
Bullock	Hunt Russet	Sailee Russet
Carpentin	Long Island Russet	Swazie
English Russet	Pome Grise	Sweet Russet

#### THE SPITZENBURG GROUP

Medium to large size, highly-colored, crisp, juicy flesh, excellent quality. Of general adaptation to Ohio with exception perhaps of too early maturity in the southern half.

Esopus	Kaighn	Mother
Flushing	Manchester	Red Canada
Jonathan		

#### \*THE SUMMER PEARMAN GROUP

*Garden Royal	*Summer Pearmain	Worcester Pearmain
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#### \*THE SUMMER ROSE GROUP

Small, brightly-colored summer apples, delicately-flavored, excellent for dessert. Trees lacking in vigor.

*Piper's Best	*Summer Rose	*White Juneating
*Sandbrook		

#### THE SWEET BOUGH GROUP

Summer or fall apples, sweet, medium to large in size, variable form, good quality. Adaptation general in Ohio.

Autumn Bough  
Broadwell Sweet

Fullerton Sweet  
\*Green Sweet

Sweet Bough

#### THE TOMPKINS KING GROUP

Large, attractively-colored, round-oblate, of good to excellent quality, limited by climatic adaptations to northern Ohio unless desired as fall varieties.

\*Bedford Red  
Blenheim  
\*Boskoop  
Fishkill  
Hubbardston

Palouse  
\*Pease  
Ribston  
\*Richards Graft  
Tompkins King

\*Utters Red  
\*Western Wonder  
\*Westfield  
\*Wismer

#### THE TWENTY OUNCE GROUP

Large to very large, round, sometimes brightly-colored, with coarse-textured yellow flesh of good quality. Season late fall in northern Ohio.

\*Collamer  
\*Hitchings

Lyscom

Twenty Ounce

#### THE WINESAP GROUP

Small to above medium size, dark, often dull red coloring, firm but fine-grained flesh, good to excellent quality, season early to late winter. Best adapted to the southern counties, with exception of Delicious and Dinwiddie. Seedlings often reproduce group characteristics. (Mottled coloring and distinctly "5-furrowed" apex and basin.)

Arkansas (M. B. Twig)  
Arkansas Black  
\*Delicious  
\*Dinwiddie  
\*Gilbert Winesap

Heiges  
\*King David  
Kinnard  
\*Magnate  
Paragon

\*Starking  
Stayman Winesap  
\*Via  
Winesap

#### THE YELLOW BELLFLOWER GROUP

Medium to large, characteristically oblong conic. Yellow with more or less blush and with a characteristic large open core. Flesh crisp, aromatic, acid to mild subacid. Season fall or early winter in Ohio.

Barry  
\*Celestia  
Flory  
Kirkland  
\*Malinda

Mason Orange  
Moyer  
Newman  
Occident

Ortley  
Summer Bellflower  
Titus Pippin  
Yellow Bellflower

## THE YELLOW TRANSPARENT GROUP

Early summer varieties, medium size, with thin skin and tender flesh. Russian origin. Adaptation general.

Breskovka  
\*Estelline  
\*Moscow

\*Recumbent  
Red Transparent

Thaler  
Yellow Transparent

The changes and additions made are based upon the experience and observations of the writer during 9 years' active service in the variety testing work in the Station orchards, and further observations as opportunity offered.

The most important addition is perhaps the Red June Group of which only two varieties have been tested. The numerous additions in the Romanite Group are the result of tests of varieties adapted to southern conditions, the most of them showing plainly the "Romanite" characters of firm, rather coarse flesh, and long-keeping quality. Some varieties in the Winesap Group give indication of relationship with the Romanite varieties, which is well within the range of possibility since these groups have the same regional adaptations, and natural crosses of these might readily produce seedlings of merit.



**ANNURCO**

This variety has been represented in the Station orchards only by grafts, the cions having been received from the U. S. Department of Agriculture, Washington, D. C. Under Ohio conditions it is without value.

Fruit medium, truncate globular, very unsymmetrical; stem short, slender; cavity narrow, deep, greenish, smooth; calyx partly open; basin medium width and depth; skin thick, tough, dots numerous and russet; color greenish-yellow, covered with dark red, nearly solid; flesh white, hard, somewhat coarse; flavor mild sub-acid; quality poor. Season midwinter.

**BEDFORD RED**

An apple of rather recent introduction. The habit of growth of tree and fruit is not unlike Wagener, however the fruit is more acid than Wagener and not as good. Tree upright in growth and moderately vigorous. Fruit medium in size, oblate, ribbed; stem slender, medium length; cavity wide and deep; acuminate, russet rays extending to cavity; calyx small to medium, closed; basin narrow, rather deep, abrupt; skin thin, tough, smooth, yellow overspread with bright red; flesh pale yellow, fine grained, tender; flavor very acid; quality fair. Season midwinter.

**BEECH'S SWEET**

Fruit medium size, oblong; skin thick, tough, greenish-yellow, nearly covered with splashes and streaks of dark red; flesh cream color, fine grained, sweet; quality fair. Season mid-September.

**BENONI**

This little apple, which originated in Massachusetts about 1800, is one of the really high quality dessert apples ripening during the summer. Except in a few favored localities in central and southern Ohio it does not attain sufficient size to be of any commercial importance. A few growers in Licking, Fairfield, and Lawrence Counties have been fairly successful with the variety. Under favorable conditions it would be of value for roadside market. It is especially valuable for home use.

The tree is very upright in form and of rather slow growth, being below the average in size; branches are long, straight, and stout; leaves medium to small.

Fruit small, round-conic; stem medium to short enlarged at juncture with twig; cavity rather narrow, deep, nearly acuminate;

calyx small, tightly closed, lobes short to medium; basin medium width, rather shallow; skin thick and tough, smooth, bloom light; dots very small, numerous, whitish; color when mature clear yellow splashed and streaked with bright pink, shading to solid crimson, very attractive; seeds numerous, medium size, light brown; flesh yellowish, very firm, crisp, juicy, flavor mild, rich subacid with pleasing aroma, quality excellent. One of the best of its season which is about the middle of August.

#### ARKANSAS BEAUTY

This variety of Arkansas origin is represented by a graft. Fruit medium size, oblate-conic; skin pale yellow, dotted, washed and faintly streaked with red; flesh creamy white, tender, juicy, flavor subacid, aromatic, quality fair to good. This variety cannot compete with standard sorts like Stayman and Baldwin under Ohio conditions. Season midwinter.

#### ARKANSAS GLOBE

The tree is lacking in vigor, divergent in growth, rather open; branches fairly stout to slender; twigs stout, dark reddish-brown; leaves medium to large. Produced first crop at 7 years.

Fruit medium to large, oblate, regular, slightly lop-sided; stem long and stout; cavity wide, medium depth, obtuse, furrowed; calyx rather small, lobes sharply recurved, dry, closed; basin rather small, obtuse, shallow to medium; skin yellowish-green, with pink blush, very light bloom; dots large, white, numerous; seeds small, reddish-brown; flesh creamy white, firm, rather tough, juicy, quality fair, flavor mild, almost sweet. Late August, the season in which this variety ripens is supplied with better varieties.

#### ARKANSAS PROLIFIC

The tree is very upright in habit of growth. Fruit small, pale yellow, washed, mottled and streaked with pink to deep carmine; flesh creamy white, with tinge of red under the skin; quality only fair. Season midwinter. Not desirable for Ohio.

#### AVERA

The variety is represented by a graft in the Station orchards from cions received from the U. S. Department of Agriculture. Fruit small to medium, oblate, inclined to conic; color greenish-yellow, dotted and streaked with bright red, splashed with crimson; quality poor. Season early October. Of little value.

**BATTUELEN** (Synonym: *Rome de Transylvania*)

Originated in Transylvania. Represented by grafts in the Station orchard. Fruit medium to small, oblate; skin greenish-yellow blushed with brownish-red; flesh greenish-white; quality fair, insipid, subacid. Season early winter. Variety undesirable judged by the fruit from this graft.

**BAXTER** (Synonym: *Baxters Red*)

Originated in Ontario, Canada. A very large handsome apple but of only fair quality, with little to recommend it except its beauty.

Fruit large, oblate-conic, base broadly truncate, often unsymmetrical, indistinctly ribbed; stem short to medium, slender; cavity narrow to medium width and medium depth, acute to acuminate; calyx small, closed to partly open; basin shallow, medium width, furrowed; skin thick, tough, oily, roughened by large grayish-white dots; flesh greenish-yellow, tender, coarse; quality fair. Season early winter.

**BLACK GILLIFLOWER** (Synonyms: *Sheepnose*, *Gilliflower*)

One of the oldest apples known in cultivation. Widely planted by the early settlers in Ohio but now only rarely cataloged by nurserymen and seldom found in Ohio orchards.

Tree large, upright, spreading, vigorous, somewhat subject to blight. Fruit medium to large, ovate oblong and because of its form more often called Sheepnose than Black Gilliflower; stem medium length, stout; cavity narrow, medium depth, acuminate, sometimes lipped; calyx medium to large, closed; basin very shallow, wrinkled; skin thick, tough, greenish-yellow covered with dark crimson and overspread with grayish scarfskin; flesh creamy yellow, dry, melting, coarse; flavor mild, subacid; quality fair. Season early to midwinter.

**BLACK OXFORD**

Originated in Maine, represented by grafts which came to the Station from Benj. Buckman of Illinois.

Fruit medium size, oblate; color orange, practically covered with dull red, shading to maroon and deep wine color; flesh firm, rather fine grained, quality good, mild subacid. Matures in December. Because of its rough skin it does not keep well. Lack of size and keeping qualities make this variety of little value as compared with many others of the same season.

**BLOOMFIELD** (Synonym: *Bentley Seedling*)

Originated in Montgomery County, Maryland, about 1880. Represented by grafts, the cions having been received from the U. S. Department of Agriculture. Judged by these grafts it is productive.

Fruit good size, round, distinctly truncated; skin smooth, thick, tough, bloom light; dots numerous, large, conspicuous; color dull green, blushed with dull red and indistinctly striped with purplish-red; flesh yellowish-white, with tinge of green, firm, juicy, somewhat granular, flavor mild subacid, rather insipid, aroma mild, quality fair to good. Season late September. In competition with McIntosh, Hubbardston, and other good varieties and cannot be favorably compared with these standard sorts.

**BONUM** (Synonym: *Magnum Bonum*)

This variety originated in North Carolina before 1850. It is attractively colored and of fair quality, but, being in season with Grimes and Jonathan, it is of little importance for Ohio.

Tree medium size, vigorous; branches fairly stout, slender; leaves medium to rather large, heavy texture, dark green. Produces good crops almost annually.

Fruit small to medium, round-oblate to globular, uniform, symmetrical; stem rather long, slender; cavity wide, medium depth, acute to acuminate; calyx large, partly open or sometimes closed, lobes convergent with tips recurved, green, pubescent; basin wide, shallow, obtuse, obscurely furrowed and wrinkled; skin thin and rather tender, surface rather dry, roughened by many minute and few large russet dots, yellow, nearly or completely covered with a solid dull crimson, faintly streaked with carmine modified by gray scarfskin; seeds medium size, very dark chocolate brown, plump; flesh yellowish with veinings of pink, rather tender, moderately juicy, granular, flavor mild subacid with peculiar aroma; quality fair to good. Season early winter. This is one of the many varieties not quite good enough to be recommended.

**BOTTLE GREENING**

This variety originated on the state line between New York and Vermont early in the 19th century. It has not been widely grown in Ohio and hardly deserves to be planted in competition with the better known Rhode Island Greening which it approximates in season. The fruit is not as large as Rhode Island Greening and probably less productive. It is subject to scald in storage.

Tree vigorous, spreading; branches stout with strong forks; bark yellowish-brown; leaves medium size, oval. Fruit medium to large, round-oblate to oblate-conic, irregular, suture line prominent in many specimens; stem short, stout, sometimes swollen; cavity wide, deep, acute to acuminate, smooth, irregularly furrowed; calyx small to medium, open or partly so; basin wide, medium to deep, abrupt, deeply furrowed; skin thin, brittle, tender, smooth, glossy with bluish bloom; dots few, white, often submerged; color rather dull yellow, blushed with brownish-red; seeds large, flattened; flesh creamy white, tender, fine grained, becoming mealy and dry when over mature; quality fair to good. Season early winter.

#### BROCKVILLE BEAUTY

This variety originated near Brockville, Ontario, Canada. Represented in Station orchard by grafts.

Fruit medium size, conical; stem long; cavity narrow, rather deep; calyx medium size, closed; basin very shallow, narrow, ribbed; skin smooth, glossy; color yellowish-white with streaks and splashes of light red; flesh firm, white; quality fair, very acid. No value for Ohio.

#### BRYANT

Represented by grafts. This variety is quite similar to Smoke-house in appearance but is of poor quality. Undesirable.

#### BUCKINGHAM (Synonyms: *Bachelor*, *Kentucky Queen*)

This variety originated in the south and has never been extensively planted in Ohio. It is of good size and fairly well colored, altho it apparently does not attain the attractive appearance credited to it in the south. The color fades in storage.

Tree moderately vigorous, upright, subject to blight, only moderately productive. Fruit medium to large, oblate-conic, irregular; skin thick, tough, smooth, greenish-yellow, dotted, washed and faintly streaked with dull red; flesh creamy white, tender, crisp, juicy; flavor mild subacid, pleasing aroma; quality good. Season early winter. Not worthy of planting in Ohio.

#### BUNCOMBE

An apple of southern origin and of fair quality but not as good as our standard varieties and of no commercial value in Ohio.

Tree moderately vigorous; leaves large, oval to narrow oblong; medium green; subject to blight. Fruit medium size, oblong; skin very thick, tough, smooth, dull yellow, nearly covered with dots and

marblings of crimson, shading to nearly solid color; flesh greenish-white, firm, coarse, somewhat granular; flavor mild subacid, peculiar aroma; quality fair. Season late winter.

#### BUCKSKIN

Represented by grafts. Fruit below medium size, flattened, oblate, irregular; skin greenish-yellow, sometimes with bright pink blush, bloom fairly heavy and waxy, dots few to fairly numerous, light green; flesh white with yellow tinge, tender, fine grained; quality mild subacid, fair. Season September 10. This variety has a peculiar musky aroma and cannot be recommended.

#### BUTTER APPLE

This little apple probably originated in Ohio and has not been disseminated outside a few counties in the northern part of the State. It is found in Ashland, Holmes, Wayne, and Stark Counties. The date of its origin is not known but it was apparently as early as 1860. It is somewhat like Fameuse in texture and aroma but not so noticeably white fleshed as Fameuse. The variety was highly prized for dessert and for making apple butter by the older residents of the section mentioned.

Tree of moderate growth and spreading; leaves medium to large. The tree is quite healthy and generally long lived and bears heavy crops biennially.

Fruit small to medium, form roundish-oblate, inclined to conic; skin thick, tough, oily; dots scattering; color yellow, washed, mottled and streaked with crimson, deepening to wine color; flesh white with tinge of yellow, very tender, buttery, very fine grained, moderately juicy, flavor mild quality good to excellent. Season September to November.

#### CAROLINA GREENING

This yellow apple does not develop sufficient size in Ohio to make it of commercial value, altho the quality is good and it is one of the long keeping varieties.

Tree of vigorous spreading growth; branches rather stocky; leaves medium to large, rather long, oval, to ovate, medium to heavy texture, green; free from diseases; produces crops early.

Fruit medium to small, oblate, inclined to conic; skin thin and rather tender, smooth, somewhat waxy; dots numerous, few russet, many submerged; color clear yellow with some whitish scarfskin

near cavity; seeds rather large, plump, obtuse, dark brown; flesh yellowish, firm, crisp, fine grained, juicy, flavor mild subacid, pleasing, spicy aroma; quality very good. Season midwinter.

#### CENTENNIAL

This variety produces good crops almost annually of fairly attractive fruit. Being of rather indifferent quality, it is of doubtful value. It ripens with Family and Fanny, each of which is superior.

Tree spreading, rather angular in growth; leaves small to medium, oval; generally disease resistant.

Fruit medium size, rounding to slightly oblate, regular; stem medium length, rather stout; cavity medium size, regular, acute, slight russet; calyx very small, closed; basin very small, shallow, obtuse, much wrinkled; skin yellow, almost completely covered with red, heavily streaked with dark crimson, heavy bluish bloom giving a purple appearance to the apple; dots large, white, conspicuous; seeds rather large, flattened, brown; flesh white, slightly tinged with green, rather firm, fine grained, juicy; quality good, subacid. Season late August and early September, requiring several pickings.

#### CHAMPLAIN (Synonym: *Nyaack*)

The origin of this variety is not known. It had quite wide distribution 50 years ago, but in 1927 is not cataloged by a single American nurseryman. It is represented in the Station orchards by grafts. The fruit is rather attractive in color and of good size. The skin, being tender, shows bruises easily. While the variety is good for cooking it does not have sufficient merit to warrant its continued propagation.

Fruit medium to rather large, rounding conical, nearly regular; stem medium to long, stout; cavity medium width and depth, acute to nearly abrupt, sometimes furrowed, very slightly russeted; calyx small, tightly closed; basin narrow to medium, abrupt, medium depth, furrowed and wrinkled; skin smooth, moderately thick, tough; dots submerged; color clear light yellow when mature; seeds numerous, medium to small, fairly plump, shaded light and dark brown; flesh white, crisp, tender, juicy; flavor brisk subacid; quality fair to good. Season late August.

#### CHRISTMAS BANANA

This is a large sweet apple originated on the farm of H. B. Young, Wayne County, Ohio. It resembles Winter Sweet Paradise

in color and flavor, being somewhat larger than that variety. The quality is very good for dessert. Season December and January. It probably has no great value.

#### CLERMONT

The Clermont is represented in the Station orchard by cions received from the U. S. Department of Agriculture. The origin of the variety is not known.

Fruit medium to small, rounding oblate, irregular or ribbed; skin rather thick, tough, smooth; dots numerous; color clear light yellow, washed with red, streaked and splashed with crimson and carmine; flesh creamy white, firm, somewhat granular; flavor mild subacid; quality fair to good. Season mid-September. Somewhat resembles Gravenstein in color and form.

#### COFFELT

The origin of this variety is not clear. As grown at the Ohio Station, it is small and much like Ben Davis in tree and fruit characteristics. It is of little value for Ohio.

#### COFFMAN (Synonyms: *Koffman June*, *Summer Red*)

Originated in Lauderdale County, Tennessee, more than 75 years ago, introduced to the trade in 1888. It closely resembles Red June but is firmer, later, and more acid. Its size and the fact that it ripens in a season well supplied with apples, make it of doubtful value.

Fruit medium to small; skin smooth, glossy, rather thick tough; color greenish-yellow, covered with dark crimson to deep wine color; flesh yellow, tinged with red, fine grained; flavor sprightly subacid; quality good. Season early August.

#### COGSWELL (Synonym: *Cogswell Pearmain*)

An old variety of Connecticut origin, but never extensively planted and now practically extinct. Not desirable. Represented in Station collection by graft.

Fruit medium to large, oblate-conic, distinctly ribbed; skin thick, moderately tough, rather dry and harsh with a pronounced grayish scarfskin over larger part of apple; color dull yellowish-green, dotted, blushed, and faintly streaked with bright red; seeds rather numerous, very plump, obtuse; flesh yellowish-white, very crisp, firm, rather coarse, juicy, flavor rather insipid, subacid; quality only fair. Season late September.



COLTON (Synonym: *Early Colton*)

Origin, probably Massachusetts. This is one of the very early apples of fair quality but, since the tree is only moderately vigorous and particularly subject to twig blight, it is not as good as Yellow Transparent.

## COOPER

Specimens described were received from Washington County, Ohio. This variety is distinct from Cooper's Market and probably is the Cooper described by Warder as having been introduced by the Putnam Nursery near Marietta in 1796. The variety originally came from the East and was described by Downing. It is not now cataloged and is only rarely found in old orchards in southeastern Ohio. It ripens too early for a winter apple and because of its tender skin is difficult to handle.

Fruit medium to large, round-oblate; stem short, green, stout; cavity medium width and depth, acute, smooth or slightly russetted, regular; calyx small, closed; basin narrow, medium depth, somewhat wrinkled and irregular; skin smooth, moderately thick and tough, dots small, white, submerged; color pale greenish-yellow, streaked and washed with bright pink and crimson; flesh white, slightly spongy, very juicy; flavor mild, subacid; quality fair to good for both dessert and cooking. Season early winter.

## COOPER EARLY WHITE

This variety came from Winfield Nurseries, Winfield, Kansas, and probably is of Kansas origin. Of no value in Ohio.

Tree vigorous, spreading, open; branches stout; bark smooth, dark gray; leaves medium green; comes into bearing early.

Fruit medium, rounding-oblate, fairly symmetrical; stem long, rather slender; cavity medium depth and width, dark green; calyx medium size, partly open; basin narrow, shallow; skin thick, tough, smooth; dots numerous, greenish, mostly submerged; color yellowish-green, faint blush on occasional specimen; seeds medium size, light brown, numerous; flesh white, firm, juicy, coarse and granular; flavor very acid; quality good for culinary uses. Too acid for dessert. Season mid-August.

COOPER MARKET (Synonyms: *Cooper's Redling*, *Cooper's Red*)

Probably originated in Pennsylvania more than 100 years ago. It is fairly productive and keeps well but aside from these two characteristics it has little to recommend it, being rather low in quality and not very attractively colored.

Tree moderately vigorous and upright; branches slender; leaves small; growth resembling Rome Beauty.

Fruit large, round-conic; stem medium to rather long, fairly stout; cavity very wide, deep, abrupt; calyx very small, closed, nearly covered with pubescence; basin small, narrow, more or less furrowed and wrinkled; skin thin, smooth, glossy; dots rather numerous, yellow or russet; color greenish-yellow, nearly covered with dots, streaks, marblings, and solid color, ranging from light red to deep carmine; flesh white with slight greenish tinge, firm, crisp, juicy, fine grained, very slightly granular, flavor subacid, quality fair. Season January to April.

Tree divergent, upright; twigs medium, stout, very dark; leaves rather large, ovate.

Fruit medium to large, conical, inclined to rounding, fairly symmetrical, generally ribbed; stem medium to long; cavity rather narrow and shallow, acute, often lipped, smooth or lightly russeted; calyx small to medium, partly open; basin narrow, shallow, abrupt, furrowed and wrinkled; skin smooth, very thin and tender, waxy; dots submerged, inconspicuous, greenish; color green, becoming yellowish when fully mature; seeds medium size, plump, light brown; flesh white with tinge of green, coarse, tender, fairly good for cooking; flavor rather sharply acid; quality fair. Season mid-July.

#### CORNELL

Originated in Pennsylvania. The variety does not have merit enough to warrant its propagation in competition with better varieties already established as standard.

Fruit medium size, globular, base and apex broad; skin thin, tender, surface smooth, dull, dry; color light yellow, streaked, splashed and mottled light crimson; flesh creamy white; texture very fine, moderately juicy; flavor mild, subacid, vinous; quality good. Season mid-September.

#### CORPS CHOICE

Probably belongs to the Pearmain group, resembling Gilliflower in color. Of little value as compared with other varieties of the same season.

Tree moderately vigorous, upright, productive. Fruit medium size, form round to nearly oblong, sometimes inclined to conic; stem medium length, slender; cavity rather wide; calyx large, closed or nearly so; basin narrow, deep, abrupt, furrowed; skin moderately thick and tough, smooth; dots numerous, yellowish, russet; color

orange yellow, nearly covered with dots and shading of crimson; indistinctly streaked with deep carmine; seeds small, numerous, acute; flesh creamy yellow, tinged with pink near skin, firm, moderately juicy, a little coarse; flavor mild, subacid, rich, pleasing aroma; quality very good as a dessert apple. Season early to mid-winter.

#### DICKEY

Origin not known. Represented in Station orchard by grafts; cions from the U. S. Department of Agriculture. An apple of pleasing quality for dessert but too small to be given any consideration for commercial planting.

Fruit medium to small, oblate, slightly inclined to conical; color clear lemon yellow; flesh firm, crisp; flavor mild, nearly sweet; quality fair to good. Season mid-September.

#### DINWIDDIE

Of southern origin. This variety, altho productive, has little to recommend it.

Tree moderately vigorous, divergent, spreading; branches rather stout; bark gray; leaves medium to small, rather narrow, dark green.

Fruit medium to small, oblate-conic, sometimes faintly ribbed; skin thin and rather tough, somewhat dry and harsh, given a dull surface by the rather heavy minutely netveined scarfskin; dots numerous, yellow russet; color yellow, nearly entirely covered with rich dark red, shading to deep wine on exposed side; flesh yellowish, firm, crisp, moderately juicy; flavor mild subacid, rather insipid. Matures in January.

#### DOYLE

Cions received from Benj. Buckman of Illinois. Probably identical with Doyle as described by Budd and Hansen as having originated in Texas. Has no special merit.

Fruit medium size, rounding-truncate, inclined to conic; skin rather thick, somewhat harsh and brittle, slightly waxy; dots numerous, especially near the basin, large yellow or brown, mostly russet; color dull yellow, blushed with brownish-red, shading to dull crimson; seeds medium size, plump, obtuse, chocolate brown; flesh creamy white, rather firm, somewhat coarse; flavor mild, subacid, nearly sweet; pleasing aroma; quality fair to good. Season early winter.

**DYER**

Probably of French origin. Of good quality for dessert but with no commercial value. Reminds one of Tolman in shape and color.

Fruit medium size, roundish, slightly inclined to conic; stem short to medium; cavity rather deep, medium width; calyx closed, basin narrow, shallow to fairly deep; dots few, medium size, russeted; color pale greenish-yellow with bronze blush; sprightly subacid; quality good. Season early September.

**EARLY MELON**

This variety is apparently not the Melon that has been described as having originated in New York and being an early winter variety. Early Melon as grown at Wooster ripens in late August. The variety has been quite productive and is of fair quality but is in season with other varieties that are superior.

Tree moderately vigorous, spreading; top rounding; twigs rather slender, dark reddish-brown; leaves rather large, oval to oblong.

Fruit medium to large, oblate, inclined to rounding-conic; stem very short; cavity rather wide and deep, acute, more or less russet; calyx very large, partly open; basin deep, medium to wide, abrupt; skin greenish-yellow, nearly overspread with dots, splashes and stripes of rich dark crimson; dots rather large, bronze or russet; seeds medium to large; flesh creamy yellow, crisp, juicy; quality good, mild, subacid, pleasing vinous flavor. Season late August.

**EARLY RIPE**

Early Ripe originated in Pennsylvania and is one of the fine appearing early varieties, in season with Early Harvest. Less productive than Early Harvest and not equal to that variety in quality.

Tree growth upright, vigorous; leaves medium size, rather heavy texture; nearly free from blight.

Fruit medium to large, broadly oblate, ribbed; stem very thick, short to medium length; cavity wide, shallow to moderate depth, acute, light to heavy brown russet; calyx very small; basin shallow, abrupt, wrinkled and furrowed; skin moderately thick, rather tough, made somewhat uneven by sunken dots which are light green; seeds medium size, light brown, plump; flesh white with slight tinge of green, very juicy, firm, fine grained, inclined to be mealy when overmature; quality fair to good; rather insipid.

## ESTELLINE

Tree rather vigorous, spreading, brown. Twigs rather heavy; leaves large, long, broad, medium green.

Fruit medium to large, conical to rounding, irregular; stem long, slender; cavity acute, medium depth; calyx closed; basin shallow, narrow, somewhat russeted; skin thin, tough; dots russet, scattering; color green, some specimens slightly blushed; seeds large, light brown; flesh white, quality very acid; probably good for culinary, too acid for dessert. In season with Transparent and Henry Clay, of little commercial value.

## ENGLISH RAMBO

This variety is distinct from Rambo or Summer Rambo. There is considerable confusion in the nomenclature, and Summer Rambo is quite often erroneously called English Rambo.

Tree upright, vigorous, spreading. Twigs of moderate length, stout.

Fruit medium to large, truncate oblong nearly equally flattened at base and apex; stem short, stout; cavity rather wide, deep; calyx large, partly closed or more often open; basin wide, deep, abrupt; skin thick, tough, roughened by many prominent russet dots; seeds large, plump; flesh white with greenish cast; flavor mild subacid, very pleasing, reminding one of Rambo but not quite so acid as that variety. Season early winter, a little later than Rambo.

## EDWARDS

Tree vigorous divergent, bushy, only moderately productive. Fruit small to medium, oblate; stem medium to long, slender; cavity rather wide and shallow, obtuse to acute, regular, smooth or very lightly russeted; calyx small, closed; lobes short, convergent; basin medium to wide, rather shallow; skin moderately thick, very tough; color dull yellowish-green, blushed, and faintly striped with dull red; seeds small, rather slender, acute, reddish-brown; flesh greenish-white, coarse, granular, and rather dry; flavor mild subacid; quality fair to good. Matures in early winter. Of no special merit.

## EARLY STRAWBERRY

The origin of this variety is not known, but it is distinct from Fall Strawberry or Autumn Strawberry. As grown at Wooster the tree is only moderately vigorous, upright to spreading. Fruit small, roundish conic; stem slender, long, wide, and of medium depth; calyx small, closed or partly open; basin shallow, medium

width; skin thick, tough; dots inconspicuous, russeted; color yellow, almost completely over colored with pink to bright crimson, very attractive; flesh creamy white, juicy; seeds large, many, dark brown; quality good, sprightly subacid. Season early August. Too small for commercial use.

ESOPUS (Synonym: *Spitzenburg*)

An apple of New York origin which has been widely disseminated across the United States. It is commonly known as Spitzenburg and belongs to the Baldwin group. Under Ohio conditions it is erratic in behavior, occasionally maturing a good crop of fine fruit but more often bearing a light crop. When well grown the fruit is of good to excellent dessert quality.

Tree moderately vigorous, open, spreading, under Ohio conditions rather seriously subject to blight and generally considered a low yielder.

Fruit medium to rather large; form roundish, truncate; stem medium to long, slender; cavity wide, deep, acute; calyx small to medium, partly open; basin small, narrow and rather shallow; color yellow, completely overspread with dull red, shading to dark crimson; seeds rather large, plump, obtuse, reddish brown; flesh nearly white with veinings of orange and pink, rather firm, juicy; flavor sprightly subacid, rather pleasant aroma; quality good to excellent. Matures in early winter.

FARTHING'S NO BLOOM

Tree moderately vigorous, divergent, spreading; fairly productive.

Fruit medium to large, irregular, oblong, some nearly cylindrical or enlarged at ends; stem medium to long, very stout; cavity wide, deep, acute to acuminate; sometimes russeted, irregularly furrowed; calyx very large, wide, open, basin very shallow, obtuse, deeply furrowed; skin rather thin and tender, smooth, waxy with thin white bloom; dots greenish, submerged; color clear yellow, sometimes blushed with pink or brownish-red; seeds absent unless hand pollinized; flesh creamy white or yellowish, firm, coarse, insipid sweet; quality poor. Season early September.

This variety is of no value for home use or commercially, but because of its lack of petals attracts attention. Its only possible value might be in breeding.

**EARLY VICTORIA**

Probably of English origin. Fruit large to very large, round-conic, unsymmetrical; stem medium length, slender; cavity narrow, rather deep; calyx closed, large; basin shallow, wrinkled; skin thin, waxy, tough; color pale yellowish-green; dots submerged, green; seeds small, light brown; flesh white, coarse, juicy; quality fair, acid. Of no commercial value being in competition with Oldenburg.

**FORTS PRIZE**

Origin not known, came from a Missouri nursery.

Tree spreading, open, divergent; twigs long, slender; much of fruit produced on terminals.

Fruit medium, rounding-conic, globular, indistinctly ribbed; stem medium to long, moderately slender; cavity medium width and depth, russeted; calyx small, open; basin shallow, narrow, furrowed and wrinkled; skin thick, tough, smooth, dry to slightly waxy; dots many, whitish, submerged; color light yellow, covered with nearly solid bright red to dull crimson; seeds numerous, light brown, tufted; flesh creamy white tinged with green, fine grained, rather dry; quality fair to poor. Season early winter. This variety, judged by its behavior at Wooster has nothing to recommend it.

**FRENCH PIPPIN**

An old variety the origin of which cannot be definitely traced.

Fruit large to very large, round-conic with rather broad base; stem short, stout; cavity wide, deep, acute or nearly acuminate; calyx large, open; basin medium to wide, deep; skin rather thin, tough, smooth; color pale greenish-yellow, blushed with bright pink to brownish-red; seeds numerous, medium size, plump; flesh yellowish-white, firm, crisp, juicy, fine grained; flavor mild subacid; quality very good. Season midwinter. Because of its color and not being superior to standard sorts, this variety is only rarely found. It belongs to a long list of varieties that have sufficient merit to appeal to the personal tastes of growers but lack commercial qualities.

**FULTON**

This variety is represented by grafts in the Station orchard that were supplied by an Illinois grower. It is probably identical with the Fullerton Sweet as described in the Apples of New York. Fruit medium to large, round-oblate; color clear yellow, sometimes blushed with brownish-pink; flesh cream yellow, tender; flavor very mild, sweet, pleasing aroma; quality good. Season late fall.

**GASCOIGNE SCARLET**

The origin of this variety is not clear but it is probably an English variety.

Tree moderately vigorous, open, spreading.

Fruit large, oblong; stem medium to long, slender; cavity deep, rather wide, greenish-russet; calyx closed; basin deep, narrow; skin rather thick, tough, smooth, with a slight lilac bloom; dots indistinct, whitish; color dull yellow, splashed with pink shadings; seeds medium size, light brown; flesh creamy white, firm, coarse, juicy, flavor acid; quality probably good culinary but too acid for dessert. Season early September. Judged by its behavior at Wooster the variety does not merit planting in this section.

**GILBERT**

As grown at Wooster, this variety is identical with Arkansas (Mammoth Black Twig).

**GOLDEN SWEET** (Synonyms: *Orange Sweeting*, *Harvest Sweet*)

An old New England apple widely disseminated over Ohio and one of the best in quality of the sweet apples, ripening during the summer and early autumn. The tree is large, vigorous, spreading, producing heavy and light crops in alternate years.

Fruit medium, rounding-oblate, fairly symmetrical; stem long to very long, rather slender; cavity medium width and depth; calyx rather small, closed; basin narrow, shallow; skin yellowish-green, becoming clear yellow; seeds medium to small, plump; flesh greenish-white, rather firm, juicy, sweet flavor, pleasing aroma; quality very good, especially adapted to baking. Of value for home use.

**GOLDRIDGE**

This small to medium sized apple originated in California and is of rather recent introduction. From its behavior at Wooster it would seem to have little value.

Fruit medium, oblate, inclined to rounding; stem short to medium; skin thick, tough; dots large, numerous, brown, some reddish-brown; color rich yellow, partly covered with crimson blush; flesh creamy white, coarse; quality mild, subacid. Season midwinter.

**HAAS** (Synonyms: *Fall Queen*, *Hoss*)

This variety originated in Missouri and has been disseminated in all sections of this State. Its outstanding characteristics are its hardiness and productiveness. However it is so low in quality that



it is valueless except for cider. The tree is spreading in growth and of rather straggling habit; twigs rather slender.

Fruit medium, oblate, uniform, regular; stem short and stout; cavity small to medium; calyx very small, closed; basin narrow, abrupt, medium depth; skin greenish-yellow, heavily streaked, striped and splashed with light to dark red; seeds medium size, dark brown; flesh yellowish-white tinged with red under skin, tender, rather coarse until fully mature; quality poor. Season mid-September.

#### HARGROVE

Tree moderately vigorous, of upright growth, subject to blight. Of southern origin.

Fruit medium size, round-oblate; stem short to medium, rather stout; cavity rather wide, shallow to medium; calyx rather large, open; basin very shallow, medium width; skin thick, tough; dots small, numerous; color lemon yellow, sometimes blushed with brownish-pink; seeds large, plump, rather long; flesh firm, moderately tender, juicy; flavor mild, subacid; quality fair to good. Season early winter. Of little value.

#### HATHAWAY

Tree vigorous, bushy, and difficult to prune.

Fruit medium to large, roundish-conic; stem medium to long, slender, sometimes fleshy; cavity rather wide, deep; calyx small to medium, open; basin narrow, rather deep; skin fairly smooth, thick but rather tender; dots numerous, yellow or russet; flesh creamy white, tender, juicy; quality good. Season late fall. Especially adapted to apple butter.

#### HEIDEMEYER

This variety is represented in the Station orchard by grafts.

Fruit large, oblate-conic; stem very short to medium; cavity medium in width and depth; calyx small to medium, closed or partly open; basin medium width, rather deep; skin thin and tough, dry; color dull greenish-yellow, blushed and indistinctly striped with brownish-white with tinge of green, flesh very firm, juicy, rather tough, aromatic; quality fair. Season late September. Does not merit planting.

#### HEIGES

This variety apparently belongs to the Winesap group and probably originated in Arkansas. The tree resembles Ben Davis in habit of growth, being upright, divergent, becoming spreading or even drooping.

Fruit medium to large, globular to roundish-oblate; stem medium length; cavity medium width and depth; calyx small to medium, partly open; basin narrow, rather shallow; skin rather thin and tough, smooth; bloom bluish, becoming waxy; seeds very numerous, rather large; flesh yellowish with veinings of green; flavor subacid, quality fair. Season late winter. Much inferior to Stayman.

#### HENRY CLAY

Tree upright when young, spreading into symmetrical form with heavy fruiting. Large leaves. Russian type.

Fruit medium to large, oblate, base broad; stem very long, medium to stout; cavity deep, wide; basin medium to shallow, wide; calyx large, tightly closed; skin thin, medium to tough; color pale yellow; dots inconspicuous; seeds few, plump, large; flesh white, texture fine; flavor mild, subacid; quality good, milder in flavor than Oldenburg. Season late July and early August.

It is next to impossible to handle this variety without severe bruising; its use is therefore limited to the home and nearby market. It cannot be recommended to supplant Oldenburg.

#### HIBERNAL

A Russian variety of value in the colder regions of the country but of little value in Ohio.

Tree moderately vigorous, divergent, spreading, open growth; very productive.

Fruit large to very large, oblate-conic, with broad flat base; stem medium to short, very stout; cavity wide, deep, acute to acuminate; calyx large, green, closed; basin rather narrow, medium depth, abrupt; skin thick, tough, smooth; color pale yellow, dotted and splashed with over coloring ranging from pink to bright crimson; seeds rather small, rounded, plump; flesh yellowish, firm, coarse; flavor rather sharp acid; quality poor, too acid for dessert. Season early September.

#### HIBKEE

This variety was introduced by the South Dakota Horticultural Society. Like Hibernal where hardiness is the limiting factor the variety may be of value but it has no special value here.

Tree medium size, moderately vigorous; comes into bearing early.

Fruit medium to very large, oblate; stem medium to short, slender to medium thickness; cavity medium width, deep, acute;

calyx closed or partly open; basin wide, medium to deep, abrupt; skin thick, tough; dots small, whitish, prominent; color pale greenish-yellow, overcolor pink varying to dull red; streaked and splashed with dark crimson; seeds small, short, plump; flesh creamy white, crisp; quality good for culinary use but too acid for dessert.

#### HICKS

This variety is said to have originated in New York State. As grown at Wooster it is a large sweet apple; color pale yellow with scattering streaks and splashes of bright pink. Ripens early in August. Quality poor.

#### HIGHFILL

This is a seedling of Ben Davis that originated in Arkansas about 1878.

Tree vigorous, divergent, spreading, rather bushy, moderately productive.

Fruit medium, decidedly conical with broad flat base; stem rather short to medium; cavity wide, deep, acute; calyx small to medium, closed or slightly open; basin narrow, moderately deep, abrupt; skin thin and tough, very smooth and glossy; bloom heavy, bluish-white like that of a prune; dots small, yellow or orange; color greenish-yellow, covered with bright red, shading to deep carmine; very attractive; seeds large, round, plump, dark brown; flesh white with veinings of green, firm, fine grained, crisp, moderately juicy; flavor mild subacid; quality fair. Matures in February and March.

#### HOMESTEAD

Probably of southern origin.

Tree moderately vigorous, upright, rather light producer.

Fruit medium to large, round-oblate; stem medium to long; cavity wide, moderately deep; calyx medium to small, closed; basin rather narrow and shallow; skin dark brown; flesh greenish-white, coarse, tough, juicy; flavor sprightly subacid; quality fair. Season mid-August. Of less value than other and better known sorts of the same season.

#### HUNGE

Tree vigorous, very upright.

Fruit large, variable in form, oblate to oblong-conic; cavity very wide, deep, acute; calyx very small, partly open; basin narrow, rather deep; skin moderately thick and tough, smooth; dots

medium size, white; color light green, becoming pale yellow, sometimes largely blushed with dull red; seeds medium size, shaded light and dark brown; flesh white, firm, crisp, juicy; flavor subacid; quality fair. Season late September. Of only limited value.

#### IOWA BLUSH

Probably originated in Iowa. Here in Ohio it has been so small that this fault alone would eliminate it as a commercial variety. The quality being only fair, it is not to be considered worthy of propagation in Ohio.

Tree vigorous, divergent, spreading, very bushy, making a large dense top. Productive.

Fruit small, truncate, conical, inclined to rounding; stem rather long, moderately stout; cavity medium size, rather deep; calyx medium to small, closed or partly open; basin wide and deep, very abrupt; skin thick, tough, smooth; color clear pale yellow, with brownish-pink blush; seeds numerous, dark brown; flesh firm, coarse; flavor subacid, peculiar aroma; quality fair. Keeps until April.

#### JACKSON

Originated in Pennsylvania. An apple of medium size probably belonging to the Blue Pearmain group. As grown at Wooster it is rather insipid; ripens in late winter. It is not worthy of propagation.

#### JULY

An old Russian variety of the Oldenburg group. It usually ripens a few days earlier than Oldenburg and is more attractively colored; but being more tender in flesh it cannot be considered as good as Oldenburg.

#### KAUMP

An apple said to be hardy in the northwest but because of its low quality is of little value in Ohio.

The tree is vigorous, upright, divergent, and comes into bearing early.

Fruit medium size, round inclined to conic; stem short to medium, slender; cavity wide, shallow; calyx small, closed; basin narrow and shallow, faintly wrinkled; skin thick, rather bright, waxy; color light green to dull yellow with brownish blush; seeds large, numerous, light brown; flesh white with tinge of yellow, tough; flavor mild, subacid, insipid; quality poor. Season mid-September.

**KENTUCKY CREAM**

As the name implies, this variety originated in Kentucky.

Fruit medium size; color lemon-yellow, rather sparingly dotted and streaked with pink and bright red; quality good. Season mid-September. Other varieties of the same season surpass it in quality.

**KESWICK** (Synonym: *Codlin*)

An old English apple found only occasionally in Ohio.

Tree large, vigorous, upright, subject to blight.

Fruit large, round to conic, sometimes ribbed; stem short and fleshy, often filling cavity; cavity acute; calyx small, closed; basin small, wrinkled; skin thin, waxy; color yellowish-green, slight dull brownish-red blush and faint stripes; seeds small; flesh white to creamy, tough, coarse; flavor acid; quality fair for culinary uses. Season early August.

**LANCASTER GREENING**

This variety was described by Downing as having originated in Lancaster County, Pennsylvania. It probably belongs to the Reinette group of varieties.

Fruit medium, globular inclined to conic; stem short to medium, usually stout; cavity medium width and depth, sometimes lipped; calyx large, closed; basin shallow, wide, wrinkled. Skin thin, tough, smooth; color pale greenish-yellow, dotted and blushed with brownish-pink; seeds medium size, long and slender, dark brown; flesh greenish-white, firm; flavor mild, subacid; quality fair to good. Season late winter.

**MAGNATE**

This variety originated with Dr. Stayman, Leavenworth, Kansas, and has been erroneously disseminated as Magnet. Magnate is distinctly a "Winesap" in fruit and tree. The fruit is of good quality, the tree productive. It matures in early winter and for this reason, together with the fact that the fruits are rather small, it is considerably less valuable than Stayman.

Fruit medium to small, oblate-conic; stem slender, to rather stout, long; cavity wide, deep; calyx small, nearly closed; basin small, shallow, obtuse; skin rather thick, tough, dry; color yellow nearly covered with pink to deep carmine, few streaks; seeds small; flesh yellow tinged with pink, firm, juicy; flavor rich subacid, milder than Winesap; quality very good. Season early winter.

**MAGNUM**

A southern variety of good quality that bears some resemblance to Stayman but is smaller. Less desirable than Stayman.

Tree medium to vigorous growth; regular, divergent.

Fruit medium size, round inclined to conic; stem very short to medium; cavity rather wide; calyx medium to large, open; basin rather wide and deep, abrupt wrinkled; color yellowish-green nearly covered with dull waxy bloom; much gray scarfskin; seeds rather small, obtuse, maroon; flesh white tinged with yellow, firm, crisp; flavor subacid, pleasing; quality good; matures in midwinter.

**MALINDA**

This variety originated in Vermont but has been grown mostly in Minnesota where its hardiness is a factor. Except for this character it is of little value and here in Ohio it cannot be recommended.

Tree moderately vigorous, upright to spreading, inclined to be bushy.

Fruit medium, conic, ribbed; stem short, slender; cavity deep, abrupt; calyx closed; basin medium depth, wrinkled; skin clear yellow with occasional blush of light red; seeds medium size, light brown; flesh whitish, coarse, tough; flavor subacid; quality fair. Season December.

**MAMMOTH GRIMES GOLDEN**

The name is misleading as this variety is only fair in quality and has nothing in common with Grimes except color.

Tree large, vigorous, spreading, productive.

Fruit medium to large, roundish-oblate; stem short, slender; cavity rather narrow, abrupt, deep; calyx wide, open; basin shallow, wide; skin thick and rather tough; color rich golden yellow; flesh creamy yellow, rather tough, dry; flavor subacid; quality fair.

**MARTINSBURG LONG-KEEPER**

Fruit medium to large, oblong-conic; stem short to medium; cavity rather narrow; calyx small, closed; basin narrow and shallow; skin rather thin, tough, smooth, color yellow when mature; seeds rather small, plump, light brown; flesh yellowish, firm, crisp; flavor mild subacid; quality good. Season late winter. This variety resembles Newtown Pippin in flavor and quality.

## MARYLAND SPICE

Fruit small to medium, globular, inclined to conical; skin thick, tough, dry, roughened by numerous dots; color clear yellow, largely blushed or nearly covered with dull crimson; flesh creamy white, tinge of pink near the skin, firm, coarse, rather tough; flavor mild subacid; quality rather poor. Season early to midwinter. There is little to recommend this variety except that it is attractively colored.

MASON ORANGE (Synonym: *Bellflower Improved*)

This variety is of the Yellow Bellflower type and originated in Kansas. While the fruit is not as large as the Yellow Bellflower it is apparently more productive and less acid.

Fruit medium size, variable form, usually round-conic, often lopsided, sometimes oblong; stem long to very long; cavity wide, very deep, acute, russet; calyx variable, usually small, lobes very short, closed; basin very shallow to medium, narrow; skin smooth, waxy, thin, tough; color clear yellow with brownish to pink blush, light bluish bloom; seeds medium size, dark reddish-brown; flesh pale yellow, firm, tender, crisp; quality very good; subacid. Season early winter.

## MAXON

This is one of the early varieties that is in season with Oldenburg, altho it is much less valuable than that variety. The flesh is so tender that it is difficult to handle without bruising; this fault together with its color and sharp acidity make it of little value. It was among the first varieties to bloom of the hundreds that have been tested at Wooster.

The tree is vigorous, upright, divergent, and resembles Oldenburg. Comes into bearing young and yields good crops.

Fruit medium to large, oblate; stem medium to long; cavity wide, deep; calyx large, closed, lobes broad; basin wide, medium and shallow; skin thin, rather rough, covered with white bloom; color pale green, becoming yellow when mature; flesh white, very tender, fine grained; flavor sharp acid; quality good for culinary, too acid for dessert purposes. Season late July.

## McAFEE

The McAfee originated in Kentucky and belongs to the Lawver group. Under Ohio conditions it is less valuable than many other late keeping varieties.

Tree vigorous, of branching habit, rather irregular bearer, not seriously affected by disease.

Fruit medium size, globular or roundish-oblate; stem long, slender; cavity wide, deep, nearly acuminate; calyx medium to large; basin rather wide and shallow; skin thin and rather tender, covered with a heavy grayish scarfskin; color dull greenish-yellow, striped and splashed with bright red, appearance modified by amount of scarfskin; seeds numerous, dark brown; flesh yellowish with tinge of green, firm but quite tender and fine grained, juicy; quality fair to good. Season late winter.

McCLELLAN (Synonym: *Martin*)

An old variety of Connecticut origin and probably no longer cataloged by nurserymen. It is of good quality but ripens in a season well supplied with better varieties as, for instance, McIntosh.

Fruit medium size, truncate-globular; stem medium length, slender; cavity wide, deep; calyx medium to small, closed; basin medium in width; skin smooth, rather thick and tough; color greenish-yellow mottled and washed with pink and bright red; flesh white, tender, juicy; flavor mild subacid, pleasing aroma; quality good. Season late fall.

McLEES MAMMOTH

Of little value for any purpose. Fruit medium to large, oblate, inclined to conic; stem short to medium, slender; cavity wide, deep, acute; calyx large, closed; basin medium width, shallow; skin very thick and tough, over coloring red shading to crimson; seeds rather numerous, plump, dark mahogany; flesh firm, coarse, moderately juicy; flavor insipid, peculiar aroma; quality very poor. Season late winter.

MAPLEHURST

This seedling originated on the farm of B. E. Carmichael, Rochelle, Illinois, deriving its name from that of the farm. It is represented in the Station orchards only by grafts. The season in which the variety ripens is already well supplied with varieties of good quality. Otherwise Maplehurst might be worthy of consideration for at least home orchards.

Fruit medium size, round, oblate; stem medium length, slender; cavity deep, acute; calyx open, basin narrow, abrupt; skin smooth, thick; color dull greenish-yellow, splashed and streaked with dull crimson; flesh greenish-white, crisp, juicy, tender; flavor mild, subacid; quality good. Season late August and early September.



**MILAM** (Synonyms: *Blair, Harrigan*)

The origin of this variety is uncertain, but it probably came from the south. An apple somewhat resembling Ralls in quality but not as good. Too small to be of value.

Tree large, vigorous, spreading, dense; leaves small to medium, dark green; bark yellowish-brown. Productive.

Fruit small to medium, round-conic; stem medium to long, slender; cavity wide, deep, acute; calyx rather large, partly open; basin narrow, rather shallow; skin rather thin, tough; bloom very light; dots small, very numerous; color dull yellow, mottled and streaked with pink and dull red, shading to dull carmine; seeds large, numerous, plump, light coffee brown; flesh slightly yellowish with tinge of green, fairly tender; flavor mild, subacid, pleasant aroma; quality fair to good. Season midwinter.

**MILWAUKEE**

The Milwaukee, which is of the Oldenburg type, originated near Milwaukee, Wisconsin. It is said to be very hardy in the north where hardiness is a determining factor in a variety. It bears early and is productive. In Ohio it is in season with Wealthy and other varieties much superior in quality and, altho productive, it cannot be said to be of much value.

Tree vigorous, medium size, upright-divergent; branches stout; bark yellowish-brown; twigs stout; leaves rather small, round, dark green.

Fruit medium to large, oblate, inclined to rounding; stem medium to short; cavity wide, deep, acute; calyx rather large, closed; basin wide, deep, acute to abrupt; skin rather thick and tough with a distinct lilac bloom; color dull yellow, largely marked with broken streaks and splashes of bright red to crimson; flesh creamy yellow, firm; flavor subacid, pleasing aroma; quality very good. Season early September.

**MINKLER** (Synonym: *Brandywine*)

This is an old variety, which, except for a few sections in the central part of the State, has never been grown commercially in Ohio. While the tree is vigorous and productive of large crops, the fruit is rather small. Size, color, and quality considered, the variety cannot be placed in a recommended list either for commercial or home use.

Tree large, vigorous, productive.

Fruit small to medium, round-oblate; stem long, slender; cavity narrow, deep, acute; calyx large partly closed; basin shallow, wide; skin smooth, thin, tough; flesh greenish-yellow, tender, juicy; seeds few and often undeveloped; flavor mild, subacid; quality fair. Season midwinter to later.

**MISSOURI PIPPIN** (Synonyms: *Missouri Keeper*, *Missouri Orange*)

This old apple, of Missouri origin, as grown in Ohio is of poor quality. The only point in its favor is that it is productive.

Tree moderately vigorous, upright divergent; branches stout, rather long, drooping with fruit bearing; bark gray with tinge of brown; twigs very slender, brown; leaves medium to small, oval, medium green.

Fruit small, truncate globular; stem medium length, slender; cavity wide and deep, acute; calyx medium to large, usually closed; basin rather narrow, deep, abrupt; skin glossy, thick and tough; bloom heavy, lilac or blush; color dull yellow, mottled and striped with dark crimson, shading to deep carmine or purple; seeds rather numerous, medium size, plump; flesh yellowish, tinged with purplish-pink in highly colored specimen, firm, coarse; flavor rather acid; quality fair. Matures in late winter and keeps until May.

**MONEYMAKER**

An apple of the Ben Davis group but superior to Ben Davis in quality. Ripens in late fall in season with McIntosh. Aside from its being a prolific bearer of good sized apples it has little to recommend it in competition with McIntosh and others.

Tree upright-divergent, very vigorous; twigs stout; leaves medium to large, dark green. Very productive.

Fruit large, roundish-truncated, inclined to oblong-conic; stem very short, rather stout; cavity medium width, deep, acute; calyx rather small to medium, closed or partly open; basin rather large, deep, very abrupt; skin waxy, thin, light bloom; color pale greenish-yellow, washed and striped with bright red, streaked with crimson; seeds large, reddish-brown; flesh white with very slight yellow tinge, firm, coarse, tough; flavor subacid, nearly sweet; quality fair. Season late September.

**MONOCACY**

This variety belongs to the Romanite group and probably originated in the south. It is of medium size and less desirable than the Stark.

Fruit medium size, round-oblate; stem short, slender; cavity wide, deep, acute; calyx large, open; basin moderately wide, deep, abrupt; skin rather thin, tough, smooth; color greenish-yellow, nearly covered with dark red, indistinctly streaked and splashed; seeds large, plump, dark reddish-brown; flesh yellow with tinge of green, firm, crisp; flavor subacid, mild. Season late winter.

**MOORE SWEET** (Synonyms: *Black Sweet, Josie Moore, Kelley's Sweet, Red Sweet Apple*)

This is a large sweet apple. It originated in Massachusetts early in the 19th century but has never been planted to any extent in Ohio. While not especially high in quality, it is as good as any sweet apple of its season.

The tree is moderately vigorous and spreading. It comes into bearing rather early and produces good crops almost annually.

Fruit medium to large, oblate; stem short, slender; cavity broad deep; calyx partly open; basin broad, moderately deep, slightly furrowed; skin thick, smooth, pale yellow overspread with light red modified by grayish scarfskin; flesh yellow, tender, melting; flavor mild, sweet; quality good. Season late winter.

#### MORBEN

Origin not known. Too small for commercial use.

Fruit small, oblate; stem medium to rather long, slender; cavity wide, rather deep, acute; calyx small to medium, closed or partly open; basin wide, moderately deep, obtuse; skin smooth, dull, thick, tough; color yellow, washed and faintly streaked with pink to dull crimson; seeds rather large, plump, dark red-brown; flesh firm, rather coarse; flavor mild, subacid, pleasing; quality fair. Season midwinter.

#### MOSCOW

An early apple of Russian type belonging to the Yellow Transparent group. Of little value.

Tree upright, vigorous, resembling Oldenburg.

Fruit medium, conic-oblate; stem long; cavity narrow, deep, acuminate; calyx rather large; basin medium depth, wide; skin pale greenish-yellow with a light blush; seeds ovate, large; flesh white, crisp, coarse; quality subacid, fair. Season late July.

#### NANSEMOND

An apple of Virginia origin. Aside from the fact that it is fairly productive, the variety is of little value.

Tree vigorous, upright; branches long; twigs stout.

Fruit medium to large; form roundish-conic; stem short to medium; cavity medium to rather wide, deep; calyx medium size, partly open; basin rather narrow, deep, acute; skin thick, tough, smooth; color clear yellow washed and streaked with bright red; seeds medium to small, plump; flesh yellowish, tinge of pink near the skin, coarse, juicy; flavor subacid, pleasing; quality fair to good. Season early winter.

**NICKAJACK** (Synonyms: *Summerour, Caroline, Aberdeen, Occidental, Jackson Red*)

This variety is said to have originated in North Carolina. It is rarely found in Ohio. Altho it is attractive in appearance, the quality is not good enough to warrant planting.

Tree large, vigorous, spreading.

Fruit medium to above in size, round-oblate; stem long, medium to slender; cavity wide, deep, acute; calyx large, closed or partly open; basin shallow to medium, wide; skin thin, tough, very smooth; color dull yellow covered with dull red, mottled and streaked with deep carmine, often modified by a thin gray scarf-skin; seeds large, dark chocolate-brown; flesh yellow, firm, juicy; flavor subacid; quality fair. Season early winter to midwinter.

#### NIXONITE

A very large apple of rather poor quality. Originated in Missouri. It has been grown under the name Ozark Mammoth. For Ohio it is undesirable.

Tree vigorous, spreading, very bushy; leaves large.

Fruit large to very large, rounding-oblate; stem medium length, very stout; cavity large, open; basin wide, deep; skin thick, tough; color greenish-yellow, largely blushed with brownish to bright red; seeds small, few, plump, reddish-brown; flesh creamy yellow, coarse; flavor sharply acid; quality poor. Season early winter.

**OAKLAND** (Synonyms: *Oakland County, Seek-no-further*)

An apple of Michigan origin which, as grown at Wooster, somewhat resembles Fameuse. Not worthy of propagation.

Fruit medium size, oblate; stem short, rather stout; cavity medium depth and width; calyx very small, closed; basin shallow to medium, narrow; skin smooth, yellow, washed and streaked with pink; seeds medium size, plump; flesh white, tinged with red, tender, juicy; flavor subacid to nearly sweet. Season early winter.

## OKABENA

This apple is of Minnesota origin and is supposed to be an Oldenburg X Wealthy cross. In season it is between Oldenburg and Wealthy, but it is smaller and less attractive than either. Altho it is excellent for culinary and fair for dessert uses, it cannot be considered of commercial value in Ohio. The variety is said to be hardy in its native state.

Tree fairly vigorous, spreading, resembling Wealthy; leaves rather large.

Fruit small to medium, roundish-oblate; stem medium length, slender; cavity deep; calyx large, closed; basin large, wide, rather deep; skin thick, tough, smooth; color light yellow shaded with pink, streaked and splashed with crimson; seeds rather large, light brown; flesh creamy white, crisp; flavor subacid, pleasant; quality good.

OPALESCENT (Synonyms: *Hudson's Pride of Michigan, Hastings*)

The Opalescent is of medium to large size and very striking appearance. It colors beautifully even in northern Ohio, being almost solidly covered with a bright deep red. This variety is said to have originated in Barry County, Mich., but was first disseminated to the trade by an Ohio nursery and has probably been more widely planted in Ohio than elsewhere. It is productive and bears rather early. Its color and size recommend it but it is only of fair quality and its season, October to early December, brings it in competition with such standard sorts as McIntosh, Grimes, and Jonathan. For these reasons its value is limited. Under some market conditions where quality is not the prime consideration, it may be planted in a limited way.

Tree spreading, open; twigs long, moderately stout; leaves long, narrow, light green.

Fruit large, conic; stem short; cavity large, deep, acuminate; calyx small, closed or partly open; basin small, shallow to moderately deep; skin thick, tough, glossy, smooth; seeds medium size; flesh yellow, firm, coarse; flavor subacid; quality fair. Season late fall and early winter.

ORTLEY (Synonyms: *Ortley Pippin, White Bellflower, Woodman's Long*)

An old variety of the Yellow Bellflower group, said to have originated in New Jersey. It is more attractively colored than Yellow Bellflower. Altho it is not so acid and its flavor is milder than Yellow Bellflower, it is not as desirable for culinary uses.

Fruit medium to large, oblong-conic; stem very short, thick; cavity wide, deep; calyx rather small, closed; basin rather small, narrow, medium depth; skin yellowish-green; seeds numerous, small; flesh white becoming pale yellow, tender; flavor subacid becoming insipid; quality good. Season early winter.

#### PADUCAH

The Paducah is of comparatively recent introduction, having been produced by Mr. Herbert Anderson, Ballard County, Ky., as a seedling of Rome Beauty.

The quality is too poor to warrant its planting.

Fruit medium to large, oblate; color pale yellow, streaked and splashed with pink; flesh greenish-white, coarse; quality poor. Season October 1.

#### PATTEN GREENING (Synonym: *Patten's Duchess*)

This variety was grown from seed of Oldenburg, planted by C. G. Patten, Charles City, Iowa. It is of value only because of its hardiness.

Tree vigorous, spreading.

Fruit large, round-oblate, inclined to conic; stem short, very stout; cavity wide, medium to deep; calyx large, closed; basin rather narrow, deep; skin moderately thick, tough; color pale yellow, often with a bright red or brownish blush; flesh white with tinge of yellow, firm, coarse; flavor acid; quality good for cooking, too acid for dessert.

#### PAYNE (Synonym: *Payne Long Keeper*)

This variety has been planted to some extent in Missouri where it originated. In Ohio it is in competition with Stayman and much less desirable than that variety.

Tree vigorous, inclined to be very bushy, spreading.

Fruit small to medium, round, inclined to conic; stem medium to long, slender; cavity rather wide, deep, acute; calyx very small, closed; basin very shallow, narrow; skin very thick and tough, smooth, grayish-pink scarfskin; color dull yellow, dotted and streaked with bright red, shading to crimson; seeds large, plump, nut brown; flesh creamy white, firm, coarse, juicy; flavor; mild subacid, nearly sweet; quality fair to good. Season late winter to early spring.

#### PEERLESS

The Peerless originated in Minnesota and is another of a rather long list of varieties belonging to the Oldenburg group which are inferior to Oldenburg and of little value in Ohio.

Tree moderately vigorous, upright.

Fruit large, uniform size, globular, truncate; stem medium to short, stout; cavity deep, wide; calyx medium to small; basin deep, medium to narrow; skin thin, tough, glossy, color light yellowish-green striped and splashed with light and dark dull crimson; seeds few, large, dark brown; flesh greenish-white, texture fine to medium, firm, crisp; flavor subacid; quality good for culinary uses but only fair for dessert. Season early September.

#### PETER

Supposedly a seedling of Wealthy, produced by Peter Gideon, of Minnesota, who was also the originator of Wealthy and Gideon. As grown at Wooster the Peter has been so nearly like Wealthy as to be considered to all practical purposes identical with that variety.

#### PINESTUMP

Originated in North Carolina. As grown in Ohio the color is too dull and the quality too poor to warrant its planting.

Tree moderately vigorous, upright, divergent; branches long and rather slender. Produces heavy crops biennially.

Fruit medium size, oblate, inclined to conic; stem medium to long, slender; cavity wide, deep; calyx medium to large, partly open; basin wide, shallow; skin thin, tender; color orange-yellow, covered with bright red, shading to deep carmine; modified by grayish scarfskin; seeds large, reddish-brown; flesh yellow with tinges of red, firm, coarse; flavor subacid with unpleasant aroma; quality poor. Season early winter.

#### PIPER BEST

A small summer variety, the origin of which is not recorded. Experience with this variety at the Station has been confined to the fruits from a graft. It resembles Benoni in coloring and is of about the same season.

Fruit small, round-oblate; stem short to medium; cavity small, narrow; calyx medium size, partly open; basin shallow, medium width; skin smooth, thick, and rather tough; heavy bloom; color pale yellow, washed with pink, striped and dotted with carmine; seeds rather small, reddish-brown; flesh white with tinge of yellow, firm, crisp; flavor mildly acid, sprightly; quality good.

### POORHOUSE

An apple of Kentucky origin. In outward appearance it resembles the old and well-known variety Swaar but the quality is not as good as Swaar.

Tree vigorous, upright; leaves rather large.

Fruit large, oblate; stem medium length; cavity wide, deep, acute; calyx large, open; basin wide, shallow, abrupt; skin dry, harsh, thick, tough, many russet dots on surface, greenish-yellow with more or less brownish-pink blush; seeds medium to large, dark mahogany; flesh creamy yellow, coarse, crisp; flavor subacid; quality fair. Season early winter.

### PRIZETAKER

The Prizetaker is an apple of the Ben Davis type, closely resembling Gano, but it matures earlier than that variety and is poorer in quality. Worthless in Ohio.

### REBEL

The Rebel is of southern origin and ripens in early winter. It lacks quality to warrant its planting in competition with such standard sorts as Grimes and Jonathan.

Tree upright to spreading; leaves large, dark green.

Fruit medium to large, oblate; stem medium to long; cavity wide, deep; calyx large, partly open; basin wide, shallow to medium; skin moderately thick, tough, dry, roughened by minute net-veining; color light yellow washed and dotted with bright red; seeds large, plump, coffee brown; flesh creamy white, tender, fine grained, becoming mealy; flavor mild, subacid; quality fair. Season early winter.

### RED ASTHRACHAN (Synonyms: *Astrachan*, *American Red*, *Astrachan Rouge*)

This old variety has been largely supplanted in Ohio orchards by such varieties as Transparent and Oldenburg. It was introduced into America from England about 1835, having been introduced into England early in the 19th century from Sweden.

The fruit generally ripens very unevenly, requiring a number of pickings. The trees become somewhat brittle with age and break rather easily. It is susceptible to apple scab and blight. For these reasons it is not being planted extensively. It is still widely cataloged by nurserymen. It has considerable merit for home use, being excellent for cooking and better for dessert than either Yellow Transparent or Oldenburg.



The trees are large and vigorous. They generally grow very shapely with ordinary pruning.

Fruit medium size, oblate to rounding, usually ribbed and often elliptical; stem medium length; cavity moderately deep and wide, acute, sometimes lipped, smooth, green or very slightly russeted; calyx medium to large, closed; basin rather narrow, shallow; skin smooth, glossy when polished, moderately thick and tough; bloom rather heavy; color greenish-yellow, washed, mottled and largely covered with rich dark crimson; seeds medium to large, dark reddish-brown; flesh white with tinge of green, crisp, very tender, juicy, melting; flavor sharply acid, aromatic; quality excellent for cooking, too acid to be classed very high for dessert. Average date of full bloom May 5; of picking first fruit, July 29. Average annual yield of tree 30 years from planting for 15-year period 8.2 bushels.

#### RED BELLFLOWER

An apple of little or no value, probably belonging to the Ben Davis group.

Tree moderately vigorous, spreading; producing heavy and light crops in alternate years.

Fruit medium size, oblong-conic; stem short to medium; cavity deep; basin deep, medium width; color similar to a poorly colored Gano, with occasional stripes; flesh tender, fine grained, dry; quality poor. Season early winter.

#### RHODES ORANGE

This old southern variety originated in Georgia. The variety in Ohio is of fair quality only and it has never been planted to any extent in the State.

Tree moderately vigorous, divergent, subject to blight, coming into bearing early.

Fruit medium size, oblate, truncate; stem medium length; cavity very wide, moderately deep; calyx medium to large, open; basin medium to very wide; skin rather thick, tough; color very attractive, rich orange-yellow, often nearly covered with dots and marblings of bright red; seeds large, plump; flesh white with yellow tinge, firm; flavor mild subacid; quality fair. Matures in January.

#### RICHARDS GRAFT (Synonym: *Red Spitzenburg*)

This old variety is of New York origin. It ranks very high as a dessert apple in its season, the latter part of September. It ripens unevenly and drops rather badly; these faults together with the

fact that the flesh is tender eliminate it from consideration as a commercial sort.

Fruit medium to above, oblate; stem long, medium stout; cavity very deep, medium width, acute; calyx rather small, closed; basin medium to wide, medium depth, abrupt; skin pale yellow, washed with bright red, streaked and splashed with rich crimson; seeds plump, rather obtuse, brown; flesh creamy white, crisp, tender; flavor rich, subacid; quality very good, reminding one of Northern Spy. Season late September.

#### ROBERSON WINTER

This variety is of southern origin. It is lacking in quality, comes into bearing late, and is not productive.

Tree large, spreading; branches long.

Fruit medium to large, varying from round-oblate to conic; stem short, cavity rather small; calyx open or partly closed; basin wide, shallow, medium depth; skin thick, tough; color yellowish, covered with dark red, well colored specimens similar in color to Baldwin; seeds few, small, dark brown; flesh yellowish, firm, fine grained; flavor musky; quality rather poor. Matures in early winter.

#### ROLFE (Synonym: *Macomber*)

The Rolfe originated in Maine and is said to be a seedling of Blue Pearmain. At Wooster it has been placed in the Oldenburg group. Probably it is not of commercial importance altho it has good culinary quality.

Tree vigorous, large, spreading, divergent; leaves large, dark green.

Fruit large, truncate-conic; stem long to medium, slender; cavity deep, wide; calyx large, partly open; basin deep, wide; skin medium to thin; color light yellow, streaked, splashed and mottled with light and dark crimson and carmine; seeds few, dark brown; flesh pale creamy yellow; fine grained; flavor mild subacid; quality good both for dessert and culinary uses. Season early October.

#### ROUGH AND READY

A late keeping variety, probably of southern origin. It is productive of heavy crops but the quality is too poor to give the variety any consideration under Ohio conditions.

Tree vigorous, divergent, spreading.

Fruit small, oblate; stem medium to long, slender; cavity wide, moderate depth; calyx small, tightly closed; basin wide, shallow;

skin very thick and tough, dry, harsh; color dull yellow, mottled and streaked with red, shading to solid deep wine color; seeds small to medium, dark brown; flesh pale yellowish, firm, dry; flavor subacid, insipid; quality poor. Season late winter.

#### RUTLEDGE

The Rutledge originated in Texas and has been disseminated widely. It is a late keeper but unattractive in appearance and of poor quality. It is of little value in Ohio.

Tree vigorous, spreading.

Fruit large, oblate; stem short to medium, slender to stout; cavity wide, shallow; calyx large, closed or partly open; basin wide, shallow; skin thick, tough, harsh, roughened by a net-veined scarf-skin that largely covers the surface; color dull yellow, dotted and washed with dull red, streaked with crimson; seeds rather few, medium size, reddish-brown; flesh greenish-white, firm, crisp, fine grained; flavor mild, subacid, insipid; quality poor. Season late winter.

#### SCOTCH RED

Information on the origin of this variety is not available. In outward appearance it resembles Red June. It is a good sweet variety but too small to give it commercial consideration.

Tree moderately vigorous, slender; leaves medium to small.

Fruit small, round, inclined to ovate; stem long, slender; cavity medium to wide, deep, acute; calyx medium to large, closed, acuminate; basin wide, rather deep, abrupt; skin thick and tough, smooth; seeds very numerous, medium to large; flesh white with tinge of yellow, sometimes pink, firm, crisp; flavor sweet, pleasing aroma; quality very good. Season late September.

#### SCOTT (Synonym: *Scotts Winter*)

This old variety, originating in Vermont, was formerly grown extensively in New England because of its keeping and culinary quality. In Ohio it is very acid and is surpassed by many other varieties even for cooking.

Tree of moderate growth, open.

Fruit medium to small, truncate, conic; stem short to medium, rather stout; cavity rather wide, abrupt, deep; calyx small, closed; basin rather narrow, deep, abrupt; skin moderately thick, tough, smooth, dry; seeds small, plump, dark red-brown; flesh white with tinge of yellow, firm, juicy; flavor sharp acid; quality fair, too acid for dessert. Season midwinter.

### SEQUOIA

The origin of this variety does not appear in our records but it was probably in the middle west. It is represented in the Station orchards by grafts.

Fruit medium to large, oblate to rounding; stem medium to long, rather slender; cavity medium width, deep, acute; calyx medium to small, open; basin rather narrow, medium depth, abrupt; color yellow, flecked with russet dots, sometimes with light pink blush; seeds rather large, long; flesh pale yellow, firm, coarse, tough; flavor subacid, aromatic; quality fair. Season early winter.

### SHACKLEFORD

Shackleford originated in Missouri and is one of the Ben Davis group. It is inferior to many others of its season.

Tree growth similar to Ben Davis, moderately vigorous, upright, becoming divergent and drooping with fruit bearing.

Fruit medium to large, rounding, inclined to truncate, conic; stem medium length, rather slender; cavity rather wide, moderately deep, acute; calyx large, closed, lobes long, acuminate; basin rather narrow, deep, abrupt; skin glossy, thin, tender, waxen yellow with greenish tinge, washed and streaked with bright red; seeds numerous, medium size; flesh white with slight greenish tinge, crisp, tender, dry; flavor subacid, insipid; quality only fair. Season mid-winter.

### SHERIFF

The Sheriff originated in Pennsylvania. It is of good quality, but, like many other varieties of this season, is surpassed by standard sorts such as Grimes and Jonathan.

Tree moderately vigorous.

Fruit medium size, round, truncated; stem medium to long, slender; cavity narrow, deep, acuminate; calyx rather small, partly open; basin wide, medium depth; skin smooth, rather thin, moderately tough, dull greenish-yellow, shaded with dull red to rich carmine; seeds rather few, large; flesh white or pale yellow, firm, fine grained; flavor mild, subacid; quality good. Season November to January.

### SHIRLEY

This variety is of Texas origin. At Wooster its quality is too poor to give it consideration for Ohio planting.

Tree rather vigorous, divergent.

Fruit medium size, oblate, slightly inclined to conic; stem very long, slender; cavity wide, deep, acute; calyx medium size, open; basin narrow to medium, rather deep, abrupt; skin moderately thick, tough, smooth, rather dull yellow, dotted and splashed with bright red, shading to crimson; seeds large, plump, reddish-brown; flesh white with tinges of green, firm, crisp, juicy; flavor mild subacid, insipid; quality poor. Season late winter.

#### SHOCKLEY

The Shockley originated in Georgia. In Ohio the quality is poor and the variety undesirable.

Tree erect, moderately vigorous.

Fruit small to medium size, round, conic; stem very long, slender; cavity medium, rather deep, acute; calyx small to medium, closed or partly open; basin rather narrow, shallow to medium depth; skin thick, rather tough, dull yellow, nearly covered with dull purplish red and faint streaks of crimson; seeds very numerous, rather small; flesh creamy white, coarse, tough; flavor subacid, peculiar; quality poor. Season March to April.

#### SHOEMAKER

This is a small yellow apple, the origin of which is not recorded. The variety is represented in the Station orchards by grafts which were supplied by the U. S. Department of Agriculture. It is undesirable because of its season, size, and color.

Fruit small, oblate; stem medium to long; cavity wide, medium depth, acuminate; calyx small, tightly closed; basin very shallow; skin smooth; color greenish-yellow with very faint blush; seeds medium size, light brown; flesh white, firm, tough; flavor mild, subacid; quality good. Season early August.

#### SIERRA BEAUTY

A midwinter variety, in color and size resembling York Imperial.

The tree is vigorous, upright and open. It bears early, producing heavy and light crops in alternate years.

Fruit medium to large, round conic, unsymmetrical; stem varying from medium and slender to short and stout; cavity wide, deep, acute; calyx very large, open; basin wide, shallow, abrupt; skin thick, tough, roughened by net-veining of scarfskin; color rather dull yellow, washed with pink, obscurely streaked with crimson;

seeds rather few, large, dark reddish-brown; flesh yellowish, firm, crisp, coarse; flavor subacid, pleasing aroma; quality fair to good. Season midwinter.

#### SIMMONS RED

An apple of southern origin ripening at Wooster in late September. The quality is good but it is less desirable than varieties of the same season such as Nonpareil, McIntosh, Wismer, and Mother.

Tree very vigorous, upright, inclined to be bushy.

Fruit medium size, oblate-conic; stem medium to long; cavity very wide and deep; calyx small, partly open; basin medium width and depth, abrupt; color greenish-yellow, practically covered with dots and mottling of dark red, with indistinct streaks of purple; seeds medium size, chocolate brown; flesh creamy yellow, firm, tender; flavor mild, subacid; quality good. Season late September.

#### SMOKEHOUSE (Synonyms: *English Vandevere*, *Millcreek Vandevere*)

The Smokehouse, which originated in Pennsylvania, has been grown in a limited way in most sections of Ohio but never in commercial quantities. In many cases it seems to have been planted in Ohio by former residents of Pennsylvania prompted by sentiment. The variety is of good quality for dessert and culinary uses. Grimes, Jonathan, Hubbardston, Delicious, Sutton Beauty, and others are superior for Ohio. Smokehouse and Vandevere are very similar in appearance but there seems to be no doubt that they are distinct varieties.

Fruit medium to large, oblate; stem medium to short; cavity wide, deep, acute; calyx large, often wide open; basin wide, medium to deep; skin thick, tough, roughened by many large russet dots; color yellow, dotted, washed and streaked with bright red, modified by prominent gray scarfskin; seeds large, plump, reddish-brown; flesh creamy white, firm; flavor sprightly subacid with a distinctive aroma; quality good. Season midwinter.

#### SOPS OF WINE (Synonyms: *Bells Early*, *Bennington*, *Homing*, *Sapson*)

This variety is said to be of English origin, and, while it has never occupied a place of importance in the orchards of Ohio, it is often found in the older orchards. The variety is of fair quality for dessert but its season is short and it is inferior to other varieties of the same season.

Tree moderately vigorous, spreading.

Fruit medium size, rounding oblate; stem long, slender; cavity deep, medium width; calyx medium to small, closed; basin very

shallow, small; skin dry, brittle, medium to heavy whitish bloom; color greenish-yellow, streaked and marbled with rich dark crimson, nearly solid in ripe specimens; seeds rather large, dark brown; flesh firm, white, sometimes marbled with pink; flavor mild subacid, aromatic, astringent. Season early August.

#### SPRINGDALE

This variety originated in Arkansas. In addition to being a late keeper it is prolific. However it is less desirable than varieties like Stayman and Rome Beauty or even York Imperial and White Pippin.

Tree vigorous, bushy, divergent, productive.

Fruit medium or below, rounding, oblate; stem short to medium, slender; cavity wide, shallow to rather deep; calyx small, open; basin shallow, medium widely abrupt; skin thick, very tough, dry; color dull greenish-yellow, nearly covered with dull orange red; seeds plump, numerous, dark reddish-brown; flesh pale greenish-yellow, firm, tough, coarse; flavor subacid, peculiar, and to some of unpleasant flavor; quality fair. Season late winter, keeping until May.

#### STARR

This variety is a native of New Jersey and has attracted considerable attention in some eastern sections. The tree produces good crops of rather large green, but not unattractive apples. In Ohio it ripens about the middle of August and usually has a short season. It is doubtful whether the variety is of any commercial value in Ohio, as this season is already abundantly supplied with varieties.

Tree moderately vigorous, upright, becoming spreading with fruit bearing, productive.

Fruit medium to very large, round-oblate; stem short to medium; cavity narrow, medium depth, sometimes lipped; calyx closed, small; basin medium width and depth; skin moderately thin, tough, smooth; color dull yellow, blushed with brownish-red; seeds medium size, light brown; flesh creamy white, coarse, juicy; flavor acid; quality excellent for culinary uses, too acid for dessert. Season mid-August.

#### STUART GOLDEN

A small to medium sized apple which originated in Ohio. Represented only by grafts in the Station orchards. Somewhat like Grimes but less desirable.

Fruit small to medium; form truncate-globular; stem medium length; cavity medium to rather wide, deep, acute; calyx very small, closed; basin rather narrow, medium depth, acute; skin thin, rather tough; color greenish, becoming pale yellow, sometimes with very faint pink blush; seeds numerous, small; flesh white, slightly tinged with yellow, firm, crisp; flavor sprightly subacid, aromatic; quality good. Season early winter.

#### SUMMER CHAMPION

This variety originated on the farm of W. T. Waller, Lincoln, Arkansas and was introduced to the trade in 1907. The variety is said to develop good quality in the region of its origin but here in Ohio it cannot be rated above medium.

Tree moderately vigorous, spreading, open.

Fruit medium or above in size, truncate-conic; stem medium to short, stout; cavity very deep, wide, abrupt; calyx large, partly open; skin thick, tough; color yellowish-green, streaked and mottled with dull crimson; flesh greenish-white, coarse, crisp; flavor subacid, mild aroma; quality fair. Season late August.

#### SUMMER EXTRA

The origin of this variety is not recorded. Cions came to the Station from the U. S. Department of Agriculture. It is of fair quality but its color and ripening season render it of little value.

Fruit medium size, rounding to slightly conic; stem short, medium stout; cavity medium to small; calyx small, closed; basin small, medium depth; color greenish-yellow; seeds medium to large brown; flesh yellowish-white; tough, juicy; quality fair. Season late August.

#### SUMMER PEARMAIN (Synonyms: *American Summer Pearmain*, *Early Summer Pearmain*)

An old variety the origin of which is not given in horticultural literature. It is thought to have originated in America, altho in many respects it is like some of the English varieties. This variety is now rarely cataloged and belongs to the group of varieties which were formerly prized by amateur horticulturists because of high dessert quality. It is excellent for dessert, ranking with such varieties as Mother, Garden Royal, Cox Orange, and Wismer.

Tree small to medium, moderately vigorous.

Fruit small to medium size, round, oblate, unattractive, tendency to crack; stem medium to long; cavity rather wide, medium



depth; calyx medium to large, open; basin wide, medium depth; skin moderately thick and tough, roughened by numerous russet dots and gray scarfskin; color dull yellow mottled and blushed with dull red, faintly streaked with crimson; seeds few, plump, coffee brown; flesh creamy white, tender, fine grained, juicy; flavor mild, subacid, aromatic; quality excellent. Season early September.

#### SWAAR

This old apple, which originated in New York State, has never been extensively planted in Ohio. The quality is good but it is surpassed by R. I. Greening, which it resembles in appearance.

Tree vigorous, top rounding, branches divergent.

Fruit large, round-oblate; stem medium length; cavity medium width, deep, acute; calyx medium size; basin wide and shallow; skin dry, thick, tough, much netting of russet; color greenish-yellow with mottled bronze blush; seeds numerous, plump, reddish-brown; flesh creamy yellow, firm, crisp, tough, juicy; flavor subacid; quality very good. Season midwinter.

#### TEXAS RED

This brilliantly colored apple is of little value in Ohio. The tree is only moderately vigorous.

Fruit small to medium, rounding-conic; color pale lemon-yellow more or less colored with brilliant red to deep carmine with heavy bluish gray bloom; quality only fair. The variety does not mature until early spring. Except for its very attractive coloring it has little value and is not desirable for Ohio conditions.

#### UNCLE SAM

This apple is of the Ben Davis type, ripens in September, origin uncertain. The trees in the Station orchards came from Missouri. Elliott gave "Uncle Sam's Best" as a synonym of "Fall Wine." From his description of this variety we believe the Uncle Sam here described is distinct from Fall Wine. Aside from being fair for apple butter, the variety is not desirable.

Tree moderately vigorous, very upright, slender growth.

Fruit medium to large, round-conic; stem short to medium, slender; cavity wide, shallow to medium, acute, sometimes slightly lipped; calyx large, open; basin medium in width and depth; skin rather thick and tough; color greenish-yellow, washed and striped with dull crimson; seeds medium size, reddish-brown; flesh white with tinge of yellow, firm, becoming mealy and dry; flavor subacid, insipid; quality only fair. Matures in September.

**UTTER** (Synonym: *Utter Red*)

The origin of this variety is not definitely known but it is valued highest in the colder regions of the northern states, especially Wisconsin. In Ohio it does not equal in quality such old standard apples as Grimes or King.

Tree upright, vigorous.

Fruit medium size, oblate, inclined to conic; stem short to medium, slender; cavity wide, medium to deep, acute; calyx small, closed; basin narrow to medium, shallow; skin smooth, glossy, thick; color creamy yellow, dotted, washed and striped with bright pink and red; seeds large, plump, reddish-brown; flesh creamy white, firm, crisp, coarse; flavor subacid, aromatic; quality fair to good. Season late October.

**VAN EATON**

A variety of the Rambo group. Seldom found in Ohio. It is of good quality but approximates the season of Summer Rambo, a better variety in both fruit and tree. Hence it is not recommended.

Tree lacking in vigor, spreading.

Fruit medium size, oblate; stem short, rather stout; cavity deep, widely acuminate; calyx large, partly open; skin thick, tough, some light gray scarfskin; color light yellowish-green, streaked and splashed with light to dark crimson; seeds few, plump, large; flesh pale greenish-white, fine grained, crisp, melting; flavor mild subacid, vinous; quality very good. Season early September.

**VIA**

Via is represented in the Station orchards by grafts which were received from the Virginia Experiment Station. The variety has apparently never been widely planted and tho of good quality it is not superior to other more attractive well-established varieties.

Fruit medium size, oblate, regular, rounded; stem short to medium, slender; cavity wide, deep, acute; calyx medium size, partly open; basin medium to wide, rather shallow; skin thick and tough, rather dry, roughened by network of minute cracks; color orange yellow, covered with bright scarlet shading to carmine; seeds medium size, rounded, plump, dark brown; flesh firm, crisp, very juicy, coarse; flavor very mild, almost sweet, pleasing aroma; quality excellent for dessert. Season January.

**VIRGINIA BEAUTY**

This variety originated in Virginia about a century ago. It is of good quality but nearly sweet. It is less valuable than varieties like Rome Beauty and Stayman.

Tree large, spreading.

Fruit medium to large, truncate-conic to globular; stem long, medium to slender; cavity very wide, deep, acute; calyx large, partly open; basin wide, shallow; skin thick and tough, smooth, becoming very oily with maturity; color dull yellow practically covered with dull red, shading to deep crimson; seeds medium size, plump, dark chocolate brown; flesh creamy white with yellow or greenish veinings, firm, crisp, juicy; flavor mild, subacid nearly sweet, aromatic; quality excellent. Season late winter.

**WALLACE HOWARD**

Originated in Georgia. As grown in Ohio it is of no importance either for home use or commercially.

Tree lacking in vigor, subject to blight, growth upright.

Fruit medium to large, rounding, ovate to oblong; stem medium length, stout; cavity rather wide, deep, acute; calyx small to medium, open; basin narrow, shallow to medium, abrupt, much wrinkled; skin moderately thick, harsh, brittle, roughened by numerous yellow and russet dots; color yellow covered with bright red; seeds medium to large, plump, acute; flesh creamy yellow, firm, coarse; flavor subacid, aromatic; quality fair. Season early winter.

**WARFIELD**

Warfield originated in Iowa. It is represented in the Station orchards by grafts. The quality of the variety is good but its season brings it in competition with many superior varieties, hence it is of little value in Ohio.

Fruit medium size, oblate, inclined to rounding; stem medium to very long, slender; cavity medium width and depth, acute; calyx rather large, open; basin wide, deep; skin thick, moderately tough, smooth, dull; color lemon yellow; seeds rather large, plump, red brown; flesh creamy white, tender; flavor mild, subacid, peculiar but pleasing aroma; quality very good. Season late August and early September.

**WESTERN WONDER**

There seems to be no record of the origin of this variety. It is not very generally grown but has been disseminated to some extent in Ohio. It is classified in the Tompkins King group. Its unusual

size is attractive to hucksters but its season eliminates it from any recommended list.

Tree large, vigorous, spreading.

Fruit large, oblate, slightly ribbed; stem short, stout, sometimes fleshy and deformed; cavity wide and rather shallow, obtuse, sometimes lipped; calyx large, partly open; basin wide, shallow to medium; skin waxy, thick, tough, clear yellow, washed and faintly streaked with red, shading to deep crimson; seeds small, acutely pointed, dark brown; flesh white with yellowish tinge.

W. H. S.

The origin of this variety is not known. It was introduced about 1915. The quality is poor and it is unworthy of propagation.

Tree upright, moderately vigorous.

Fruit medium size, oblate conic; stem medium length, slender; cavity medium to wide, deep, acute to acuminate; calyx open, large; basin shallow, medium width; skin thick, tough; color greenish-yellow, splashed and streaked with dull crimson, considerable gray scarfskin; flesh creamy white, coarse, moderately juicy; quality poor. Season early winter.

**WHITE JUNEATING** (Synonyms: *Early May Joanetting*, *Juneating*, *Yellow May*, *Yellow June*)

This is one of the very oldest of our present varieties. There are many legends concerning its origin and early history, which are of more romantic than practical interest. As grown at Wooster this variety is the earliest of the hundreds of varieties tested. The fruit is small and the quality only fair. It is much inferior in every way to Yellow Transparent, which is about ten days later in season.

Tree vigorous, compact, upright, subject to blight.

Fruit small, round-oblate; stem long, slender; cavity medium size, acute; calyx medium to large, nearly open; basin wide, shallow, abrupt; skin smooth, thick, tough; color lemon yellow with more or less blush of delicate pink; seeds medium size, acute, fairly plump, dark brown; flesh snow white, firm, rather dry, fine grained, melting; flavor mild, subacid with pronounced aroma; quality only fair. Season mid-July.

**WHITE PEARMAN** (Synonym: *White Winter Pearmain*)

This is an old variety the origin of which is not definitely known. It was among the varieties early introduced into Ohio by pioneers. The variety has almost disappeared from the orchards

in this State. In more recent years it has been planted to some extent in the far northwestern states where it develops good quality. At Wooster the fruit may be said to surpass White Pippin and Newton Pippin in quality. It is one of a long list of varieties that are not quite good enough to recommend and yet are too good to be wholly discarded.

Tree moderately vigorous, spreading, open.

Fruit medium to large, oblong-conic; stem medium length; cavity narrow to medium width, medium depth, acute; calyx closed; basin medium depth and width, furrowed and wrinkled, usually distinguished by five distinct protuberances; skin thin, tough, smooth; color greenish-yellow, generally blushed with orange pink; flesh greenish-yellow, crisp, coarse, firm; quality good. Season mid-winter.

#### WILLOW (Synonyms: *Willow Twig*, *James River*)

The origin of this old variety is not definitely known. It has been grown in Ohio for 75 years or more, but in the last decade has been planted very little. Its chief value is its long-keeping quality. This quality before the advent of cold storage made it of commercial value.

Tree moderately vigorous; main branches divergent with drooping laterals giving it a willow-like appearance.

Fruit medium to large, oblate-conic; stem medium length, slender; cavity wide, deep, acute; calyx small to medium, closed or partly open; basin wide, deep, abrupt; skin dry, harsh, thin, tough; color yellowish-green, mottled and striped with dull brownish-red; seeds numerous, medium to large, plump; flesh very firm, crisp, juicy, coarse, greenish-white; flavor subacid, rather pronounced aroma; quality good. Matures in late winter, keeping until April or May in cellar storage.

#### WINTERSTEIN

Winterstein is a seedling of Gravenstein, originated by Luther Burbank. It is of good quality and but for the fact that it ripens in mid-September in competition with a number of older and well-established varieties, it might be recommended.

Fruit medium size, globose, oblate; stem medium to long, stout; cavity medium to shallow, wide; basin rather narrow and shallow; calyx medium to small, partly open; color yellow, streaked and mottled with dull crimson and carmine; seeds creamy yellow; flesh firm, crisp, moderately juicy, subacid; flavor rich aroma; quality good, an excellent cooking apple. Season mid-September.

**WISMER** (Synonym: *Wismer's Dessert*)

Originated in Canada about thirty years ago, and has never been widely disseminated in Ohio. It is of very high quality for dessert purposes, ranking with such varieties as Summer Pearmain, Garden Royal, Cox Orange, and Summer Rambo. Because it ripens at a season well supplied with good varieties, its usefulness is limited. It can be recommended for planting where high dessert quality is desired.

Tree large, vigorous, spreading.

Fruit medium size, truncate, globular; stem medium to long; cavity rather wide and deep, acute; calyx very small, tightly closed; basin wide, medium depth; skin thin and brittle; color greenish-yellow nearly covered with purplish-crimson in streaks and solid color; flesh yellow, crisp, firm; flavor sprightly subacid, richly aromatic; quality excellent, especially for dessert. Matures in September.

**WORCESTER PEARMAN**

This variety is a comparatively recent importation from England. It has the same general characteristics as Summer Pearmain, being a little later and slightly larger. It is of value only for home use.

Tree spreading, medium size, open.

Fruit medium size; stem medium length; cavity narrow, deep; calyx closed; basin shallow; skin thick, tough, yellow, covered with dull crimson; flesh cream color; quality good. Season mid-September.

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\*Described in Bulletin 391, also.